



**FACULTAD DE TURISMO Y FINANZAS**  
**Faculty of Tourism and Finances**

*Ph.D. Thesis:*

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# **S-D LOGIC AND CO- CREATION IN TOURISM INDUSTRY**

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*Doctoral Thesis, to obtain the degree of Ph.D. (Doctor  
Philosophiae) in Tourism from the University of Seville.*

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Sevilla, June 2018







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## **Acknowledges**

This Thesis is a team effort, and many people in their way have contributed to its fulfilment. First of all, I would like to express my most profound gratitude to Professors Jesus Manuel Lopez Bonilla and Jesus Pena-Vinces for their patient, guidance and unconditional support through these years. Two wonderful people and great scientists that I was fortunate to meet and have as supervisors. They taught me to enjoy work and have a passion for what I do.

I would also like to acknowledge the contribution of TEI of Epirus for the opportunity that gave me to be part of its academic staff for these three years to finish my thesis.

Indeed, I would like to express my heartfelt thanks to my wife Katerina and my children Niki and Ilias for their tolerance and their love throughout this journey.

Special thanks to my father and mother in law Konstantinos and Eleni for babysitting my children and of course my parents Ilias and Niki for believing in me and encouraging me to follow my dreams.





# CHAPTER 1 INTRODUCTION

## 2.1 Overview

Value Co-Creation (VCC) has become an important paradigm in many scientific disciplines, including strategic management, consumer behaviour, and international marketing. This new revolutionary concept coined by (Prahalad & Ramaswamy, 2000) introduced customers as a source of competence for the firms. The focus from Goods-Dominant Logic (GDL) shifted to Service-Dominant Logic (SDL) (Vargo & Lusch, 2004a), which means that value is no longer created in anticipation of customer needs, but instead by such needs. This shift has become possible due to the globalisation, digitisation, and connectivity caused by the progress in modern information technologies (Buhalis & O'Connor, 2005; Neuhofer, Buhalis, & Ladkin, 2013; Prahalad & Ramaswamy, 2000). This progress put the customers in the first place and made them the most relevant group of stakeholders, especially in service industries, such as hospitality and tourism (Chathoth, Altinay, Harrington, Okumus, & Chan, 2013; Hayslip, Gallarza, & Andreu, 2013; S.-Y. Park & Vargo, 2012). The feedback-based platforms and enabling technologies gave rise to the personalization of customer experiences (Gretzel, Sigala, Xiang, & Koo, 2015; C. Morosan, 2015; Cristian Morosan & DeFranco, 2016; Neuhofer et al., 2013; Paluch 2011), and the analysis of value creation showed that such enhanced positive experiences are directly linked to value co-creation (Helkkula, Kelleher, & Pihlstrom, 2012; Prahalad & Ramaswamy, 2004a; Ramaswamy, 2011).

In an attempt to formalise and measure the VCC process the DART framework has been developed, and it focused on four main building blocks of value co-creation process: Dialogue, Access, Risk-Assessment, and Transparency (Prahalad & Ramaswamy, 2004c). However, firms are yet to find out how to equalise the perceived and the real value of services they provide, even if they are co-created. As shown by the research of Prebensen, Vittersø and Dahl (2013) these two types of values often do not coincide, especially in the hospitality industry, because of the individual

characteristics of travellers and different focus that they place on the particular factors during their trip (M.B. Holbrook, 2006). Some travellers see the journey as the possibility to expand their worldview, and others look for luxury services. In this context, price and quality are the paramount factors. While it is possible to distinguish between the perceived price and quality and the actual price and quality as the perceived price and quality often do not correspond to the actual price and quality (García-Fernández et al., 2017; Prebensen et al., 2013; Zeithaml, 1988). For instance, the higher price may signal a higher quality for the customer, when in reality it is not actually so. On the other hand, a high star rating of particular hotels may not be such a crucial characteristic of quality for some customers as compared to the opinions of their peers. The DART model is employed to analyse these factors further.

## **2.2 Value Co-Creation**

Prahalad and Ramaswamy (2000, 2002, 2004) became the pioneers in defining this new concept of VCC, but the first articles on co-creation were published already in the nineties (Ciccantelli & Magidson, 1993; Gilmore & Pine, 1997; Kaulio, 1998). However, these articles focused on “consumer participation in providing services and product innovation.” (Skaržauskaitė, 2013, p. 117). S-DL has set the basis and stimulated research to blossom in different perspectives especially in the value co-creation area (Skaržauskaitė, 2013). The shift from the traditional market where the customers were just the recipients of products to markets where customers with knowledge, skills and power to actively engage in the Value Co-Creation process has begun.

Value Co-Creation (VCC) is in the heart of the new service marketing reality, and the question that arises is what exactly is VCC and how customers are co-creating? Each of the new aspects of service marketing provides a different definition of Value Co-Creation. Vargo & Lusch (2015) in SDL theory state that, the value is not dyadic but includes a variety of actors among which

is always the beneficiary. The beneficiary is also the one that will determine the value within a context with actor generated institutions and institutional arrangements. In Service Logic (SL) researchers argue that value is regarded as a value in use (Grönroos & Gummerus, 2014). While VCC is considered as: "Actions taken by the actors on a co-creation platform, where the actors may directly and actively influence each other's processes (e.g. supplier service process and customer consumption and value creation processes). " (Grönroos & Gummerus, 2014, p. 214). Furthermore, Customer-Dominant Logic (CDL) researchers use the term "value formation" (Heinonen & Strandvik, 2015) instead of value creation to denote that is a process where value emerges and not deliberately created. This value is also value in use and emerges in an individual and social context in two different but tangled processes, the providers' and the customers'. CDL introduces the term of "presence" instead of interaction as an element of value formation (Heinonen & Strandvik, 2015). Presence is focused on the provider and how provider's value proposal in a physical and mental state (Heinonen & Strandvik, 2015). Frow, Payne, & Storbacka (2011) consider the involvement of actors, in a variety of collaboration forms, which are willing to interact and integrate resources to create reciprocal beneficial value. Last, but not least Galvagno & Dalli (2014), after a systematic and extended literature review on VCC describe the process as an active simultaneous engagement of the customers with the firms, that produces tangible and intangible value. As pointed out by Chathoth, Ungson, Harrington, & Chan (2016) co-creation has gradually evolved from Fordist manufacturing, which has transformed to sales, consumer marketing, mass customisation, co-production, and, finally, to co-creation.

Galvagno and Dalli (2014) in their research concluded that the papers defining the concept of co-creation could be clustered into six large groups: a) those that are concerned with co-creating value through customer experience and competence, b) those that are focused on service-dominant logic, c) those that focus on service innovations, d) those that focus on the development of service science, e) those that emphasize online and digital customer involvement, and f) those that emphasize individual collaborations of consumers and communities with companies. The current research does



not support such strict division, mainly because we believe that these approaches are often interwoven when analysing empiric examples.

## **2.3 DART Model**

In their search for formalising and measuring the value co-creation process Prahalad and Ramaswamy, (2004c) have developed the four building blocks of interactions, which together form the VCC procedure, and called them the DART model. The DART model is called this way because it consists of four such blocks: Dialogue, Access, Risk-Assessment, and Transparency, hence the abbreviation (DART). Prahalad and Ramaswamy (2004a, 2004c) suggested the DART model as a tool for firms to engage customers in value co-creation, hence giving them a ready roadmap for the practical implementation of co-creation, which could allow them to improve upon their core competencies. The names of DART model building blocks were deciphered by Prahalad and Ramaswamy (2004c) for their easier practical application. In particular, they noted that Dialogue implies “interactions, deep engagement, and the ability and willingness to act on both sides” (Prahalad & Ramaswamy, 2004a, p. 9). Access means that customers should be aware of all information that is concerned with firm’s products and services, Transparency implies that such information should be readily available and easy-to-find, and Risk-assessment means that customers must be aware of the risks associated with such knowledge.

Prahalad & Ramaswamy (2004a, 2004c, 2004b) implied that by employing such strategy firms could increase customer engagement and attract more customers to their businesses. This implication was tested in an empirical setting by a few studies, such as the Nike’s + co-creation platform (Ramaswamy, 2008) and the study of Spena *et al.* (2012) who studied the store experience of customers using DART building blocks as independent variables. Also, the study of Mazur and Zaborek (2014) who analysed the internal validity of the model, the study of Albinsson, Perera and Sautter (2016) who showed the impact of DART building blocks on service loyalty and shared

responsibility. Taghizadeh *et al.* (2016) focused on the effects of DART model on innovation strategy and market performance, and finally, the analysis of Schiavone, Metallo, & Agrifoglio (2014) studied the impact of DART on firms' social media strategy. This list shows that DART model generally holds well for service-based industries, but hospitality industry lacks research focused on DART model, despite being service-based (Chan, Yim, & Lam, 2010; Chathoth et al., 2016; Morosan, 2015). For this reason, it is important to fill the gap, as DART model presents a potentially perspective way of improving profitability and leveraging the overall performance of hospitality sector. This is especially relevant, as the framework will be used to measure price and quality perceptions from the customers' perspective in the traditional hospitality context.

## **2.4 Value co-creation in Hospitality Industry**

The modern tourism industry is a highly information-intensive industry, which is why it heavily depends on information and communication technologies (Buhalis, 2003; Neuhofer, Buhalis, & Ladkin, 2015). Those companies that choose not to use these technologies willingly separate themselves from the vast pool of customers, who would gladly use and improve their services. Hospitality is a vital part of the tourism industry, and the firms that provide hospitality services are mainly concerned with providing accommodations and catering (Kandampully, 2006; Lashley, 2008). These services are inherently homogenous, but hospitality firms can compete by changing the fundamental characteristics of their services, thus providing enriched experiences and high-quality services (Chathoth et al., 2016; Walls, Okumus, Wang, & Kwun, 2011). The answer to the question of how to change these characteristics is provided by value co-creation theory in general and DART model in particular. The existing feedback-based platforms, such as TripAdvisor, Foursquare, Booking.com, and many others give the customers a possibility to voice their concerns and suggestions, and the official representatives of hospitality companies can answer to them and improve upon them (Wiltshier & Clarke, 2017; Xiang, Schwartz, Gerdes, & Uysal, 2015). Most companies

have chosen to follow the VCC approach, as value co-creation happens even without their knowledge due to the proliferation of aforementioned feedback-based platforms.

The research of Chathoth *et al.* (2016) has put a significant emphasis on co-creation specifically in the hospitality industry and linked it to customer engagement. The role of co-creation in tourism and hospitality context is so important because of its “inherent nature as a potentially proactive service provider” (Chathoth *et al.*, 2016, p. 231). However, the introduction of co-creation into the organisational context is not an easy task, as the hospitality companies that want to adopt the co-creation approach and acquire the so-called higher-order customer engagement must demonstrate the necessary fit and synergy between the strategy and organisational activities. Although there exist enabling technologies that allow co-creation to happen on the industrial scale, companies must embrace them and implement them in their strategy. Otherwise, such technologies can transform into the barriers. As Shaw, Bailey and Williams (2011) noted, hotels employ co-creation strategies when they focus on development through service innovation. Also, Morosan (2015) has demonstrated with his research how mobile technologies were adequately used to encourage co-creation in the U.S. hotel industry, by elucidating the way hotel guests perceive personalisation, show their trust to the hotel, and use personal innovativeness to acquire authentic experiences. The ability of guests to personalise their services using mobile devices allowed the companies to increase the trust of their guests and, therefore contributed to higher loyalty and repeated interactions (Morosan, 2015).

Taking into account, all of the above implementation of a VCC strategy by hotels can facilitate them to differentiate from the competitors and provide them with unique and authentic experiences.



## **2.5 The Relationship between VCC Customers' Positive Experience and Satisfaction**

Since co-creation is about creating authentic experiences (Binkhorst, 2005; Ramaswamy, 2011) and because the experience-based consumption focuses on hedonic value for the customers (Prebensen, Woo, & Uysal, 2014), there is no wonder that value co-creation is linked to creating customers' positive experience. Prebensen, Vittersø and Dahl (2013) noted "the more the customer puts into a tourist experience, the more that person experiences positive and memorable experience value" (p. 241). These researchers opine that since travelling is an activity that people undertake their involvement in its creation willingly is an essential part of shaping customers' positive experience. In this context, the particular aspects of VCC that customers associate with their positive experiences include a certain location, the consumption of unique "niche" products (authentic experiences, physical surroundings, time, effort, etc) and the money as compared to the customers' perception of "value for money" (Binkhorst, 2005; Prebensen et al., 2013; Walls et al., 2011). Tourism is a co-created experience per se since the positive experience of tourists depends on the values, presuppositions, and characteristics of such tourists (Prebensen et al., 2013). Especially in the hospitality industry creating unique experiences is a way to differentiate from the competitors (Walls et al., 2011). The essential part of creating positive experiences in the context of value co-creation process is to maximise customer engagement (Chathoth et al., 2016; J.-H. Kim, Ritchie, & McCormick, 2012; Prebensen et al., 2014). Without a higher degree of customer engagement, customer experiences cannot be maximised (Chathoth et al., 2016), which means that the more the companies support value co-creation, the more likely it is that their customers will enjoy their unique experiences. The last allows concluding that customer co-creation experience is a highly subjective measure that must be tackled to the personal characteristics of each traveller. Hence, there is no wonder that the personalised experiences that can be created with co-creation methods are more likely to

succeed at satisfying such personal characteristics. The enjoyment of these experiences leads to satisfied and loyal customers (Grewal, Levy, & Kumar, 2009; Jaakola, Helkkula, & Aarika, 2015).

Nonetheless, there is limited research on how co-creation procedures affect hotel customers' experiences (Binkhorst & Dekker, 2009; Jaakola et al., 2015; Walls, 2013) and respectively whether this positive customer experience has an impact on customer satisfaction.

## **2.6 The Relationship between Value Co-Creation and Customer Price and Quality Perception**

Value perception is an essential part of value co-creation process since it imposes the subjective perception of value on the actual value, created by the service providers (Sweeney & Soutar, 2001; Zeithaml, 1988).

Zeithaml, (1988) with his seminal work on perceived value defines it as "...the consumer's overall assessment of the utility of a product based on perceptions on what is received and what is given" (Zeithaml, 1988, p. 14). However, indicative of the ambiguity of the perceived value definition is that many researchers have worked on this construct producing equivalent perceptions (Arslanagic-Kalajdzic & Zabkar, 2017; Eggert & Ulaga, 2002; Prebensen & Xie, 2017; Sánchez-Fernández & Iniesta-Bonillo, 2007).

Sánchez-Fernández & Iniesta-Bonillo (2007) after extent research on perceived value concluded that there are two main categories of perceived value. The first category is the uni-dimensional approach, a simplistic approach where perceived value is comprised of price-quality perceptions. The second is the multi-dimensional approach a complex approach where perceived value is furthermore affected by intangible parameters and personal emotions.

Consequently, the perceived value embeds, however not exclusively, the elements of price and quality of service to what is given and what is received (Arslanagic-Kalajdzic & Zabkar, 2017; Sweeney & Soutar, 2001).



However, the perceived value of experiences often differs from the expected value, and the sum of many experiences of a tourist plays an essential role in the measurement of the former. On the other hand, such measurement highly depends on the subjective perception of a particular tourist about his/her voyage, which returns us to the initial analysis of value perception based on the individual characteristics of tourists. This individual perception can vary widely, and Prebensen, Vittersø & Dahl (2012) have used the example of a restaurant, which may convey lower perceived value even if it has elegant atmosphere but does not have many visitors.

Many researchers have concluded that price and quality perceptions have an impact on customer's value perception (Kotler & Keller, 2012; Rothenberger, 2015). In particular, the perceived price is critical, as it determines the acceptable objective price and is often considered to be a signal of quality (Oh, 2003). Perceived quality is also a tentative concept, as such researchers Yang, Mueller, & Croes (2016) has shown that perceived quality might not match the objective rating system of hospitality services, such as the star rating system of the hotels. On the other hand, the linkage between the perceived quality and co-creation has been established by the research of Hau, Tram Anh, & Thuy (2017), who have found that active customer participation and interaction leads to higher levels of perceived values. While Zhang, Jahromi, & Kizildag (2018), affirmed that co-creation activities in the sharing economy affect customers' value perception, as well as their willingness to pay higher prices.

This unique perception of value, regarding a marketing strategy it is essential to be examined to comprehend whether VCC procedures affect customers' perception of prices and service quality.

## **2.7 Structure of the Thesis**

This thesis is structured into five chapters that investigate VCC aspects in the hospitality context. The first chapter is the PhD thesis introduction and is followed by the chapter two with an article titled "*DART model from a customer's perspective: An exploratory study in the hospitality industry of Greece.*" In this research we develop a measurement scale based on the four building

blocks of the DART model. The scale is intended to be evaluated in the hospitality sector from customer's perspective. The third chapter presents a second essay called “*Consolidating DART–Value Co-Creation Theory in the Context of Customer Satisfaction: Empirical Evidence from Greece’s Hospitality Industry*”. The measurement scale is used to evaluate whether VCC procedures in the hotels affects guest experiences and consequently guest satisfaction. The fourth chapter presents a manuscript headlined “*Value co-creation and exchange value in the hotel industry in Greece*”. In this paper, we examine whether DART model would affect the perceived value through perceived price and perceived quality.

Lastly, in chapter five we present a summary of the PhD thesis key findings and limitations with proposals for future research.

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## **CHAPTER 2**

### **DART model from a customer's perspective: An exploratory study in the hospitality industry of Greece.**

#### **Abstract**

The customers are an essential element for marketing decisions and became a factor decisive to develop collaborations with the company. Our study examines the four building blocks of the interaction of the DART model (Dialogue, Access, Risk, Transparency), in the hospitality industry from the client's perception. This approach of the research is paramount as Value Co-Creation and DART model especially, are based on a dialogical process between equal partners. That means that the principles of the four building blocks of interaction are applied to all the actors involved, equally. This argument is amplified as the dividing line between producers and consumers is barely evident in the Service-Dominant Logic. Our exploratory study has been carried out at the Makedonia International Airport in Thessaloniki, Greece. Partial Least Squares (PLS) provides empirical support to conduct our exploratory study.

Key Words: DART model, S-D Logic, Positive Experience, Hospitality Industry

### 3.1 Introduction

Information and Communication Technology (ICT) has dramatically changed the tourism industry (Buhalis, 2003; Buhalis & Foerste, 2014; Tussyadiah, 2015) and has allowed visitor transactions to occur at any time and in any place (booking hotel rooms, buying aeroplane tickets, and so on) creating a dynamic environment for tourists. Travelers can interact with not only other tourists but also companies, brands, and products (Gretzel & Jamal, 2009; Harridge-March & Quinton, 2009) and they can actively engage in various points of a product's lifecycle (McCabe, Sharples, & Foster, 2012; Neuhofer, 2016; Roser, Samson, Cruz-Valdivieso, & Humphreys, 2009).

In this dynamic environment, tourism and hospitality marketing must adapt and evolve to Service-Dominant Logic (SDL) (Chathoth et al., 2013; Hayslip et al., 2013; S.-Y. Park & Vargo, 2012). Proposed by Vargo and Lusch (2004), SDL seems to be the most suitable for interpreting today's tourism market, as tourism is mainly a service management sector (Hayslip et al., 2013; Lashley, 2008). SDL focuses on service and the co-creation of value, with the customer actively participating in the process of the service using his knowledge, skills, and experience to shape the final deliverable (S.-Y. Park & Vargo, 2012; Vargo & Lusch, 2004b, 2004c).

This concept paved the way for Value Co-Creation (VCC) within various socio-economic factors because different entities implicitly or explicitly remain involved in the various phases of tourist (Tsiotsou & Goldsmith, 2012). Some operational frameworks and measurement tools were developed for VCC (Galvagno & Dalli, 2014; Payne, Storbacka, & Frow, 2008; Ranjan & Read, 2014; Skaržauskaitė, 2013; Yi & Gong, 2013). Prahalad & Ramaswamy (2004b) suggested four building blocks of interactions characterise the process of VCC: dialogue, access, risk–benefits, and transparency, which are also known as the DART model. The DART model is simple and considered the most impressive and efficient one for firms, providing a rigid framework for VCC implementation



(Albinsson et al., 2016; Mukhtar, Ismail, & Yahya, 2012; Payne et al., 2008; Skaržauskaitė, 2013; Tanev, 2011).

Consequently, the aim of this study is to evaluate the DART model in the hospitality, filling in the literature gap in the tourism industry (Chan et al., 2010; Chathoth et al., 2016; C. Morosan, 2015). This research develops a measurement scale to validate the model from a customer perspective rather than a firm's perspective. This approach is based on a dialogical process between equal partners, which means that the principles of the four building blocks of interaction are equally applied to all the actors involved. This argument is emphasised since the dividing line between producers and consumers is unclear (Ramaswamy, 2011). This study identifies linkages in the literature between the DART model with customer's experience, satisfaction, and loyalty to develop the theoretical framework. The methodology and implications are presented in the later sections.

## **3.2 Literature Review**

### **3.2.1 What is S-D Logic?**

Vargo & Lusch (2004a) perceived the market changes in the 21st century and identified a shift in focus from products to services and from the producers to consumers. As a result, they introduced Service – Dominant Logic (SDL). SDL is a ground-breaking theory not because of the innovation or the discovery of something new but because of the discovery of something old. Just like Plato's cave allegory (Plato, 1992) when a change in the perspective of the prisoners revealed to them that what they saw on the cave's wall were just shadows cast by real objects. The same way Vargo and Lusch (2015) with SDL theory explained to us a different perspective on the market, a perspective where the product's importance lies in service provision. Thus the products are the shadows cast by service.

More specifically, S-D Logic is based on 11 Foundational Premises condensed to 5 axioms (Table 1). These Foundational Premises and axioms have evolved in time through a constant dialogue and interaction between Vargo and Lush (2015) and the research community (Vargo & Lusch, 2015). The first axiom that remained unchanged from the original theory underpins the role of service in SDL as the application of operant resources (skills and knowledge) (Park & Vargo, 2012; Vargo & Lusch, 2008b). The second axiom defines value as a co-created value not only between a firm and a customer but between multiple actors, including always the one who benefits (Vargo & Lusch, 2015). In this axiom, there was an evolution from co-produce (Vargo & Lusch, 2004b) to co-creation (Vargo & Lusch, 2004b, 2006) and from dyadic interactions to interactions between multiple actors (Vargo & Lusch, 2015). The third and the fourth axioms were not present at the original FPs' but added on 2008 (Vargo & Lusch, 2008a, 2015). The third axiom states that all the actors involved in the value co-creation process are resource integrators while the fourth axiom describes value as something that only the beneficiary can shape (Vargo & Lusch, 2008b). Finally, the fifth Axiom is the latest addition to S-D logic and emphasises the role of institutions in the behaviour of the actors (Vargo & Lusch, 2015).

*Table 1. Axioms of Service - Dominant Logic (Vargo & Lusch 2015)*

Axioms of Service – Dominant Logic	
1st	Service is the fundamental basis of exchange
2nd	Value is co-created by multiple actors, always including the beneficiary
3rd	All social and economic actors are resource integrators
4th	Value is always uniquely and phenomenologically determined by the beneficiary
5th	Value cocreation is coordinated through actor-generated institutions and institutional arrangements.

These five axioms underpin the role of service in the marketing and the substantial role of the actors' in the value co-creation, which is fundamental in S-D Logic. Core ideas of S-D logic such as service and value co-creation are widely accepted (Galvagno & Dalli, 2014; Grönroos & Gummerus, 2014; Grönroos, Strandvik, & Heinonen, 2015; Gummesson & Grönroos, 2012; Williams, 2012).

SDL has set the basis and stimulated research to blossom in different perspectives especially in the value co-creation area. The shift from the traditional market where the customers were just the recipients of products to markets where customers with knowledge and skills have the power to engage in the Value co-creation process actively has begun.

### **3.2.2 What is Value Co-Creation (VCC)?**

Prahalad & Ramaswamy (2000) described the shift from the customers' traditional role to the ability to co-create value as an evolution. The dynamic engagement of the clients with the firms and other actors allows them to create value (Galvagno & Dalli, 2014; Prahalad & Ramaswamy, 2000). Vargo & Lusch (2015) in S-D Logic theory state that value is not dyadic but includes a variety of actors among which is always the beneficiary. The beneficiary is also the one that will determine the value within a context with actor generated institutions and institutional arrangements.

On the other hand, Service Logic (SL) researchers argue that SDL's aspect on VCC is misty and difficult to provide managerial practicality (Grönroos et al., 2015). On the contrary to SDL, SL examines in depth and explicitly the value co-creation process (Grönroos et al., 2015). In this sense, a Service Logic lexicon was introduced by Grönroos and Gummerus (2014) providing 19 definitions on SL terms of which 14 are about Value Co-Creation. More specifically value is considered as value in use while VCC is considered as: "Actions taken by the actors on a co-creation platform, where the actors may directly and actively influence each other's processes (e.g. supplier service process and customer consumption and value creation processes)" (Grönroos & Gummerus, 2014, p. 91).

Also, Customer-Dominant Logic researchers use the term "value formation" instead of value creation to denote that is a process where value emerges and not deliberately created (Heinonen & Strandvik, 2015). This value is also value in use and appears in an individual and social context in two different but tangled processes, the providers and the customers. Service Logic introduces the term of



presence instead of interaction as an element of value formation (Heinonen & Strandvik, 2015). Presence is focused on the provider and how provider's value proposal in the physical and mental state (Heinonen & Strandvik, 2015).

Frow, Payne and Storbacka (2011) after a literature review on the subject consider that VCC essential elements are: "(1) active involvement of at least two 'actors'; (2) the integration of resources that creates novel and mutually beneficial value; (3) a willingness to interact and co-create; and (4) a 'spectrum' of potential forms of collaboration" (Frow et al., 2011, p. 1). That led the to define VCC as "An interactive process, involving at least two willing resource integrating actors, which are engaged in a particular form(s) of mutually beneficial collaboration, resulting in value creation for those actors" (Frow et al., 2011, p. 1).

Last but not least Galvagno and Dalli (2014) after a systematic and extended literature review on VCC describe the process as "... the joint, collaborative, concurrent, peer-like process of producing a new value, both materially and symbolically" (Galvagno & Dalli, 2014).

However, the research on VCC is not limited to the above references, on the contrary, there is some papers and research streams such as Consumer Culture Theory that debate on the subject (Frow et al., 2011; Galvagno & Dalli, 2014; Saarijärvi, Kannan, & Kuusela, 2013). All these differences of the research streams on VCC that presented above indicate the importance of the new firm-customer dynamic relationship (Galvagno & Dalli, 2014; Mustak, Jaakkola, & Halinen, 2013). In this dynamic relationship, interaction and dialogue are the keywords. An interaction where firms and actors must have an active role and engage with each other in order VCC to occur (Grönroos & Voima, 2013). Hence, customers are integral creators of all kind of resources to create value (Grönroos & Ravald, 2011; Heinonen et al., 2010; Lusch & Vargo, 2006).

### 3.2.3 VCC Models

Some operational frameworks and measurement tools for VCC are developed (Galvagno & Dalli, 2014; Payne et al., 2008; Ranjan & Read, 2014; Skaržauskaitė, 2013; Yi & Gong, 2013). Mukhtar (2012) presented a categorization of co-creation models and co-creation techniques. Co – creation models are the context to the VCC process while techniques are methods to interact actively and engage actors in order firms to learn from a customer. Each technique has its characteristics and serves a particular purpose, hence the right choice and combination of models and techniques is needed in order the VCC process to be successful (Mukhtar et al., 2012).

Skaržauskaitė (2013) has made an extensive research on the models that were developed to manage and measure VCC. Models were divided into two categories (a) Theoretical Models of Co-creation on Customers (b) Perspective and b. Theoretical Models of Co-creation on Organizational and management contexts. The overview of these models concluded that there is a lack of empirical models with quantitative data to measure and manage VCC. Nonetheless, four models are presented in this research as some of the most acknowledged and discussed in the VCC literature.

Such model of VCC is the model of Payne et al. (2008), their model entails three sets of processes involving Customer, Supplier, and Encounter. The names of the methods indicate the one who participates in VCC actions or both of them. Hence:

a) Customer processes, the customers' experiences from the products or/and services lead to knowledge and decision whether to continue with this relationship or not.

b) Company's processes

Firms take actions to provide VCC opportunities acquire knowledge from the customers and for the customers and facilitate them to VCC. These activities also involve planning implementation and development of metrics

c) Encounter processes

Both customers and supplier meet each other for a two-way interaction. These interactions can entangle from firm's perspective telephone calls, invoicing, etc. or from customer's perspective inquiries, complaints, etc. or on both perspectives, a meeting at a trade fair.

According to Payne et al. (2008), three form of encounters facilitates VCC. These are:

Communication encounters

Actions from firms to promote connection and dialogue with the customer

Usage encounters

Actions from customers using the product or/and service through services that support usage

Service encounters.

Interactions between the customer and the service personnel or application.

In addition, encounters can be categorised as:

Emotion- supporting encounters—themes, metaphors, stories, analogies, recognition, new possibilities, surprise, design;

Cognition- supporting encounters—scripts, customer promises, value- explaining messages, outcomes, references, testimonials, functionality; and behaviour and action supporting encounters—trial, know-how communication, and usage of the product (Payne et al., 2008, p. 90).

Each type of encounter has different characteristics that are optimal for various use in VCC. As Payne et al. (2008) state some contacts promote customer experience while others are ideal for VCC. Finally, these encounters can be critical negative or critical positive meaning very satisfying or very dissatisfying interactions (Bitner, Booms, & Tetreault, 1990)

Another VCC framework is the one from Ranjan and Read (2014). Their VCC model is based on Value Co-production and in Value in Use which are the two primary dimensions of VCC. Sub-elements comprise these two essential elements. In the Value co-production, these sub-elements are Knowledge sharing, Equity, and Interaction, on the other hand, Value in Use consists of



Experience, Personalization and Relationship. Based on this theoretical framework they also developed a measurement index of VCC.

Yi and Gong (2013) presented a VCC framework that analyses customers' VCC behaviour. The authors consider two types of behaviour: a) Customer participation behaviour and b) Customer citizenship behaviour. The first is essential for VCC to be successful while the second is not critical to VCC process and it is voluntary. Nonetheless, customer citizenship behaviour adds "...extraordinary value to the firm" (Yi & Gong, 2013, p. 1280). Customer participation behaviour consists of four dimensions: a) Information seeking, b) information sharing, c) responsible behaviour, and d) Personal interaction. On the other hand, customer citizenship behaviour also comprises of four dimensions: a) feedback, b) advocacy, c) Helping, and d) Tolerance. Based on this theoretical model the researchers developed a customer VCC behaviour measurement scale from customer's point of view.

Finally, DART model, the conceptual framework of Prahalad and Ramaswamy (2004b) is based on dialogue (Tanev et al., 2011). The four building blocks of this context, Dialogue, Access, Risk Assessment and Transparency, are essential for VCC to occur. DART model is about the dialogue between actors as an active engagement between equal partners (Prahalad & Ramaswamy, 2004c). In order customers to engage in such a productive conversation, firms must provide access to information about the products and the services (Prahalad & Ramaswamy, 2004c). Furthermore, companies must allow access to tools for customers to contribute and collaborate with the firm. Access enhances the feeling of equity for the actors while Transparency on the company's operations enhances trust (Prahalad & Ramaswamy, 2004b, 2004c). Also, Access and transparency allow customers to assess risks and benefits from the use of the product or the service.

While all the four models are fascinating DART model is considered the most efficient one is providing a rigid framework for VCC implementation (Albinsson et al., 2016; Mukhtar et al., 2012; Payne et al., 2008; Skaržauskaitė, 2013; Tanev et al., 2011).

### **3.2.4 DART model**

Not many researchers have applied and evaluated the DART model. An extended search revealed four studies related to the use and evaluation of the DART model. Spena, Carida, Colurcio, and Melia (2012) used the DART model as a theoretical framework in qualitative research on store experience and co-creation. Their findings suggest that the success of temporary stores in Italy lies in the deployment of the four building blocks of interaction. VCC emerges because of the interaction and the experiential relation between the firm and the customer.

Mazur and Zaborek (2014) evaluated the DART model in a study on Polish service and manufacturing companies using a quantitative methodology. Confirmatory factor analysis was used for 30 indicators initially and a final grey of 13 indicators. They suggest, "...the DART model may not be an accurate representation of co-creation practices in companies" (Mazur & Zaborek, 2014, p. 106).

Albinsson et al. (2016) developed a scale for the four constructs of the DART model. The DART model was used to evaluate service loyalty and shared responsibility. More specifically, they investigated whether shared responsibility is related to a high DART assessment and whether a significant assessment is related to customer loyalty. A survey was conducted online with a sample of 269 university students. The respondents had to choose a company and think of a particular product or service to answer the questions. Confirmatory factor analysis was used, and the findings suggested a positive relationship between shared responsibility and the DART model. However, the various implications could only show a partial relationship between the DART model and service loyalty. Among the four building blocks, only had a significant interaction with loyalty.

Taghizadeh, Jayaraman, Ismail, and Rahman (2016) developed a scale for the DART model and applied it to innovation strategy and market performance. Survey data from 249 managers from telecommunication companies were tested using Partial Least Squares Structural Equation Modelling

(PLS-SEM). The results of the analysis showed a strong, positive relationship between DART and the innovation strategy.

Consequently, there is a lack of research concerning the DART model and the hospitality industry.

### **3.2.5 VCC and positive hotel guest experience**

The fundamental characteristics of the traditional hospitality industry are guest services and experience, while the primary product is the provision of accommodations or catering, which are homogeneous (Lashley, 2008; Orfila-Sintes & Mattsson, 2009; Reisinger, 2001). Consequently, differentiation lies in the enhancement of their fundamental characteristics. Creating and providing high-quality services and unique and enriched experiences for guests give hotels advantages over their competitors (Chathoth et al., 2013; Choi & Chu, 2001; Prahalad & Ramaswamy, 2004b; Walls et al., 2011).

Services are designed to be experienced by customers, and creating experiences is the core of the hospitality industry (Neuhofer et al., 2015). Unique personalised experiences are at the heart of VCC (Prahalad & Ramaswamy, 2004a, 2004b) and VCC is an essential element of SDL (Vargo, Maglio, & Akaka, 2008). Helkkula, Kelleher, and Pihlstrom (2012) define co-created value as “value in the experience,” which means the “...individual service customers' lived experiences of value that extend beyond the current context of service use to also include the past and future experiences and service customers' broader lifeworld contexts” (p. 59). Majboub (2014) suggests that .. “tourism providers need to create 'experience environments' by integrating resources to co-create high-value experience...” (p. 27). Therefore, the application of VCC can upgrade a hotel's service by offering unique, personalised experiences.

### **3.2.6 DART model and positive experience**



DART's dimensions are presented in relation to customer's experience in the hospitality context. As a building block of interaction, dialogue is the only way to interact and share knowledge (Ballantyne, 2004; Ballantyne & Varey, 2006; Grönroos, 2004; Prahalad & Ramaswamy, 2004c). Dialogue entails profound and dynamic engagement and interaction that lead to the co-creation of experience (Binkhorst & Dekker, 2009; Prebensen et al., 2013). The better the quality of the dialogue, the more valuable the co-created experience is (Binkhorst & Dekker, 2009) it means that hotels that want to offer a unique experience for their guests must provide a variety of channels and opportunities for dialogue to occur.

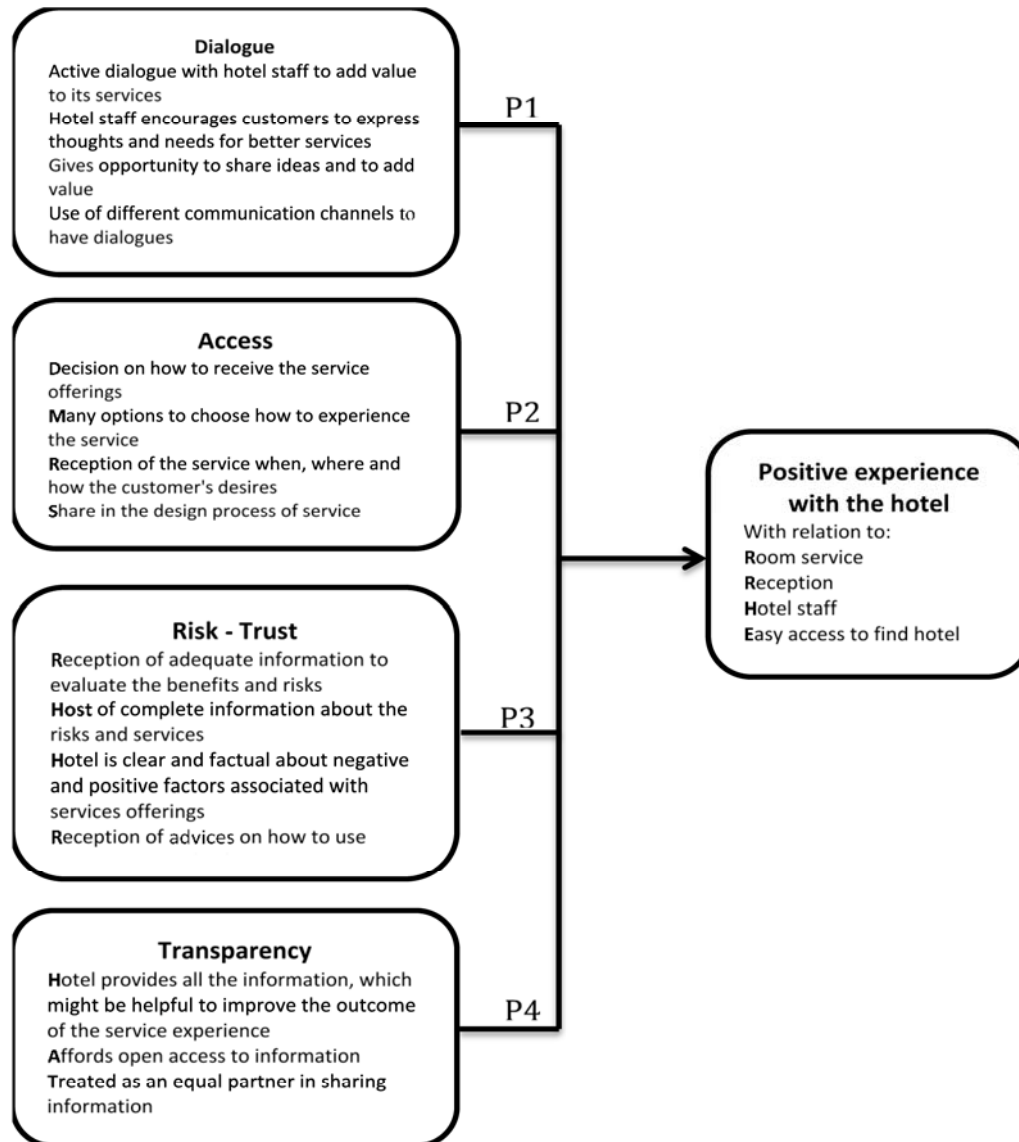
Apart from the dialogue, access also enhances customer experience, as it facilitates more efficient exchange (Albinsson et al., 2016). Firms provide access to tools and information to the customers to co-create the value experience (Pralhad & Ramaswamy, 2004c, 2004b). Access also juxtaposes ownership (Pralhad & Ramaswamy, 2004c) by providing access to lifestyles and disregarding the need to "own" them. This is an essential element in the context of hospitality, as many firms allow access to exotic or luxurious experiences.

Hotels must provide ways to access their tools and information, such as reservation systems, social media accounts, and lifestyles. These facilitate more productive dialogue and therefore a better customer experience (Binkhorst & Dekker, 2009). Nonetheless, by accessing information and tools, the co-creation process poses risks for all the actors involved. Risk assessment of the co-creation outcome must be made by all the actors involved in the VCC (Albinsson et al., 2016; Prahalad & Ramaswamy, 2004c). Firms should not communicate only the benefits but also the potential risks of their proposals to help their customers reach informed decisions and boost trust between them (Pralhad & Ramaswamy, 2004b, 2004c).

Transparency is the fourth building block of interaction and concerns the "symmetry of information during interactions, which enables the rise of strategic information and trust capital for both partners" (Spena et al., 2012, p. 24). Transparency is crucial for a genuine active dialogue

between equal partners. A firm's openness facilitates trust, equality, and discussion, which leads to an enhanced customer experience.

*Figure 1. Conceptual framework for DART*



Therefore, the four building blocks of the DART model have a positive effect on customers' experiences, and that leads to the following propositions:

*P1. Dialogue with the hotel enhances customers' experiences*

*P2. Accessibility of the firm's information and tools increases customers' experiences*

*P3. Risk assessment by the hotel increases customers' experiences*



### **3.3 Methodology**

#### **3.3.1 Measures development**

The constructs were conceptualised in the previous section, whereas here we develop the items to measure the concepts (Bhattacharjee, 2012). Indicators concerning the DART model were drawn from the literature. More specifically, the four items for dialogue, three items for access, three items for risk, and three items for transparency were adapted from Albinsson et al. (2016). Two items from Mazur and Zaborek (2014) were used, one for risk and one for transparency. For access, one item is adopted from Taghizadeh et al. (2016). Finally, items were adopted from Grisseman & Stokburger-Sauer (2012) for positive experience and modified accordingly. In total, 20 items were developed for five constructs (see items in Table 2). All the elements were measured using a 5-point Likert scale ranging from 1 ("totally disagree") to 5 ("totally agree").

The model was assessed using the PLS-SEM technique, a form of structural equation modelling that provides a "robust framework for estimating causal models with latent variables and systems of simultaneous equations with measurement errors" (Ringle & Sinkovics, 2004, p. 310). One of the advantages of PLS-SEM is that it can be used for either exploratory or confirmatory research (Lowry & Gaskin, 2014b) which makes it popular among researchers. SmartPLS v.3 was used to apply the PLS-SEM methodology.

#### **3.3.2 Data collection, sampling and Exploratory study**

A pilot test was run to detect potential problems in the questionnaire design. The pilot testing survey took place at the Makedonia International Airport in Thessaloniki, Greece. The researcher obtained permission to conduct the questionnaire at the departure gates, where the travellers are more carefree and relaxed since they have passed all the checkpoints. Questionnaires were given to travellers that had stayed at a hotel in the days before their departure. The questionnaires were given

on a single day, and 44 passengers met the criteria and were willing to participate. The number of surveys is adequate, as a pilot survey needs only a small sample number from the target population (Bhattacharjee, 2012). The pilot study revealed some minor syntax and grammatical errors, which were corrected. The data were also used to test the validity and reliability of the model.

The questionnaire was designed and divided into two parts, one for demographic information and the other for the measurement items. The sample is travellers at the airport who are waiting for outbound flights. These travellers must have stayed at a hotel before their trip to fill in the questionnaire. SmartPLS v.3 was used to establish construct validity by running bootstrap to perform a confirmatory factor analysis (CFA) (see Table 2). About construct validity, the loadings were significant, ranging from 0.64 to 1 (Bhatnagar, Kim, & Many, 2014). However, two items had negative values and were eliminated from the model (Carmines, Zeller, & Anonymous, 1979). The last argument is well documented by Panagopoulos, Kanellopoulos, Karachanidis, & Konstantinidis (2011, p. 697), “In Greece, hotel websites give the impression of an overpriced brochure and act as an information and contact providers, while only a small amount of hotels provide online reservation and booking capabilities”. Zafiroopoulos and Vrana (2006) in their research on Greek hospitality industry concluded that less than a quarter of all Greek hotel websites offer online booking and reservation. Although such study was written almost a decade ago, it is indicative of Greek hotel managers’ attitude on being interactive with the customer and share information. Regarding the second item with the negative value the attempt to justify it focuses on the lack of spatial hospitality planning in Greece. Most of the hotels are scattered throughout Greece to any possible location near the sea, as blooming tourism leads to illegal coastal development (Andriotis, 2006). Many hotels are located at “nowhere” street, as these streets are not registered.

The convergent validity of the measurement model was assessed using the average variance extracted (AVE) procedure (Fomell & Larcker, 1981). Convergent validity indicates how closely a measure is related to a construct (Bhattacharjee, 2012). Acceptable values for AVE and CR are above

0.5 and 0.7, respectively (Fornell & Larcker, 1981). The values for all the constructs exceeded these numbers (see Table 2). The reliability of the construct was evaluated using Cronbach's alpha as a measure of internal consistency (Bhattacharjee, 2012) and the composite reliability (CR) (Fornell & Larcker, 1981). The value for satisfaction was excellent ( $\alpha > 0.9$ ), for access, while they were good ( $\alpha > 0.7$ ) for dialogue, risk, and transparency. The value was acceptable ( $\alpha > 0.6$ ) for positive experience (Bhatnagar, Kim, & Many, 2014).

*Table 2. Constructs and Results*

VARIABLES	$\lambda$	$\alpha$	AVE	$\hat{R}$	$\hat{c}$
<b>DIALOGUE WITH HOTEL</b>		0.837	0.655	0.882	0.665
I had an active dialogue with the hotel staff on how to add value for its services.	0.802				
The hotel staff encouraged me to express my thoughts and needs for better services.	0.702				
The hotel gave me the opportunity to share my ideas to add value to its services.	0.798				
I used different communication channels to have dialogue sessions with hotel staff.	0.920				
<b>ACCESS TO HOTEL</b>		<b>0.805</b>	<b>0.628</b>	<b>0.869</b>	<b>0.628</b>
I could decide how to receive the services offering	0.793				
I could have many options to choose how to experience the service/product offering.	0.876				
I could receive the service/product offering when, where and how I want it.	0.835				
I had the opportunity to share in the design process of service/product.	0.646				
<b>TRUST WITH HOTEL</b>		1	1	1	1
I received adequate information to evaluate the benefits and risks of the hotel's services.	1				
I obtained complete information about the risks and advantages of the hotel's service.	1				
The hotel was very clear and factual about both the negative and positive factors associated with the services offering.	1				
The hotel personnel gave me advises me on how to use its services to avoid various kinds of risks.	1				
<b>TRANSPARENCY OF THIS HOTEL</b>		<b>0.812</b>	<b>0.634</b>	<b>0.772</b>	<b>0.634</b>
The hotel provided me all the information, which might be helpful to improve the outcomes of the service experience.	0.886				
The hotel affords me open access to information that might be useful in enhancing the overall design and delivery of the service experience.	0.885				
I was treated as an equal partner in sharing information that was needed to achieve a successful hotel service experiences.	-0.428				



The information (costs and pricing) provided by the hotel was up-to-date, which fosters the best possible experience with relation to its services they offer.	0.886				
<b>POSITIVE EXPERIENCE WITH HOTEL</b>		<b>0.626</b>	<b>0.606</b>	<b>0.788</b>	<b>0.606</b>
I had a positive experience with relation to room service	0.840				
I had a positive experience with reception	0.876				
I had a positive experience with hotel staff	0.946				
I had a positive experience with relation to easy access to find the hotel	-0.236				

Note:  $\lambda$ =Loadings  $\alpha$ =Cronbach's Alpha; R: Composite Reliability;  $\hat{c}$ : Communalities

### 3.4 Conclusions and implications

The main conclusion that can be drawn from the literature review is that SDL and VCC form a new marketing landscape. Advances in ICT enable a plethora of points of interaction between consumers and firms with equivalent engagement possibilities to exchange dialogue and co-create anywhere and at any time (Buhalis, 2003; Buhalis & O'Connor, 2005; Chathoth et al., 2013; Gretzel, Fesenmaier, & O'Leary, 2006; Ramaswamy, 2008; Tanev, 2011). Consequently, it is inevitable that hotels must provide customers access to tools and information to co-create value experience. The four building blocks of interaction from the DART model offer a path to enhanced interaction between firms and customers. This increased interaction can lead to VCC. This study attempted to evaluate the DART model in the hospitality context, as there is a lack of research on VCC in this particular sector (C. Morosan, 2015). More specifically, this research evaluated the DART model from a customer's perspective in relation to the formation of positive experience about room service, reception, hotel staff, easy access to find the hotel.

Numerous implications could be drawn from this study. At a theoretical level, this research assessed whether the application of the DART model to the hospitality industry contributes to customer's positive experience. On a managerial level, managers can evaluate a hotel's "openness" to clients and also the possibilities and offerings for co-creation. The use of this model can reveal the strengths and weaknesses of the methods employed for active interaction with their clients, especially since this model is focused on the customer's perspective. Lastly, the use of this model can help



managers to improve their understanding of VCC procedures and redesign hotel services and operations accordingly.

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## **CHAPTER 3**

### **Consolidating DART–Value Co-Creation Theory in the Context of Customer Satisfaction: Empirical Evidence from Greece’s Hospitality Industry.**

#### **Abstract**

This study evaluates the dialogue, access, risk, and transparency (DART) model in traditional hospitality to assess the extent to which value co-creation (VCC) affects positive experiences, and whether such experiences influence visitor satisfaction. This study is first to evaluate the DART model—a firm-oriented model—from a customer’s perspective in the hospitality industry. Using a sample of 483 international tourists lodged in Greek hotels, and structural equation modelling, we find support for the hypothesis. Results suggest that two DART components—access and transparency—affect positive experiences, and positive experiences strongly influence tourist satisfaction. These results can help hotel managers with improving their understanding of VCC procedures and redesigning hotel services.

**Keywords:** DART model, value co-creation, hospitality, positive experience, satisfaction,

Greece



## 4.1 Introduction

The market is changing due to technological advancements and empowered consumers. These changes are reflected in new marketing theories, such as service logic (SL) (Grönroos & Ravald, 2011), service dominant logic (SDL) (Vargo & Lusch, 2004), and customer dominant logic (CDL) (Heinonen et al., 2010). These approaches reveal fundamental transformations of consumer behaviours, in which the latter is involved dynamically in a firm's value proposition. Hence, firms can only provide services as value propositions (Cabiddu, Lui, & Piccoli, 2013). Value co-creation (VCC) is a vital part of these theories; consumers are engaged in service processes, with their knowledge, skills, and experiences shaping deliverables (Park & Vargo, 2012; Vargo & Lusch, 2004). Although researchers in service marketing and tourism marketing have long been aware of this co-creation process (Dolnicar & Ring, 2014), VCC hospitality and tourism literature remains nascent (Campos, Mendes, do Valle, & Scott, 2016; Chathoth, Ungson, Harrington, & Chan, 2016; Park & Ha, 2016). According to Prebensen and Xie (2017), little research assesses VCC, and even less examines VCC in tourism and hospitality. The current study examines VCC in the hospitality industry to fill this gap. Although a service industry with a perpetual need to enhance customer experience, the hospitality industry lacks related research (Chan, Yim, & Lam, 2010; Chathoth et al., 2016; Morosan, 2015).

The DART model (Prahalad & Ramaswamy, 2004a, 2004b) was chosen as a framework to analyse VCC in hospitality. To comprehend VCC, which derives from consumer participation (Prahalad & Ramaswamy, 2004b), DART offers four blocks of interactions. Each letter in the DART model represents a block of interaction, including dialogue, access, risk, and transparency. Customer VCC through DART is a strategy that allows formulation of innovation strategy (Taghizadeh, Jayaraman, Ismail, & Rahman, 2016), though as the literature suggests, research into its building blocks is largely ignored. DART has been applied in companies such as Nike (Ramaswamy, 2008), and has been evaluated by manufacturing and service firms (Mazur & Zaborek, 2014), telecommunication companies (Taghizadeh et al., 2016), retail/temporary shops (Spena, Carida,

Colurcio, & Melia, 2012), and healthcare providers (Chakraborty & Dobrzykowski, 2014). However, the model has never been assessed in a hospitality industry.

This paper assesses the DART model in a hospitality industry, and although the model is firm-oriented, a measurement scale was developed to validate the model from a customer perspective, providing information on customers and how they perceive VCC with hotels. This approach is paramount since VCC and DART are based on a dialogical process between equal partners, meaning that the principles of the four building blocks of interaction are applied equally to all actors. This argument is amplified since the dividing line between producers and consumers is barely evident (Ramaswamy, 2011). The process of VCC appears important, having a large effect on consumers' service evaluations (Heidenreich, Wittkowski, Handrich, & Falk, 2015) and satisfaction (Ranjan & Read, 2014). DART links with a hotel's customer satisfaction through service experiences since customer participation during VCC is an experience itself (Helkkula, Kelleher, & Pihlstrom, 2012; Prahalad & Ramaswamy, 2004c), and the result of the experience determines the degree of satisfaction (Chan et al., 2010; Payne, Storbacka, & Frow, 2008; Xiang, Schwartz, Gerdes, & Uysal, 2015). To explore DART–VCC in a hospitality industry, this paper (1) assesses the reliability and validity of the DART scale from a consumer perspective in the hotel industry, and (2) analyses relationships in the model regarding positive experiences and hotel customers' satisfaction.

## **4.2 Literature Review**

Technological advancements and empowered consumers changed the marketing perspective. A new era is emerging in services marketing in which customers use knowledge, skills, and power to interact with a firm to co-create value (Galvagno & Dalli, 2014; Grönroos, Strandvik, & Heinonen, 2015; Gummesson & Grönroos, 2012). VCC lies at the core of the new services-marketing reality, and a question arises concerning how customers co-create. The complex nature of VCC resulted in much research that offers a variety of definitions and aspects on VCC and its

processes (Galvagno & Dalli, 2014; Saarijärvi, Kannan, & Kuusela, 2013). Despite extensive research on VCC and several operational frameworks and measurement tools (Galvagno & Dalli, 2014; Payne et al., 2008; Ranjan & Read, 2014), contributions to managerial applications and implications have been minimal (Chan et al., 2010; Galvagno & Dalli, 2014; Ranjan & Read, 2014; Saarijärvi, 2012). One of the first and most influential models of VCC is DART, a conceptual framework introduced by Prahalad and Ramaswamy (2004c). DART is based on four building blocks of interaction—dialogue, access, risk assessment, and transparency—which are essential to VCC. DART concerns dialogue between actors as active engagement between equal partners (Prahalad & Ramaswamy, 2004a). For customers to engage in such dynamic dialogues, firms must provide access to information regarding goods and services (Prahalad & Ramaswamy, 2004a). Firms must also allow access to tools for customers to contribute and collaborate. Access enhances a perception of equity for actors, and transparency of a company's operations enhances trust (Prahalad & Ramaswamy, 2004a). Access and transparency combined allow customers to assess risks and benefits from use of goods and services. DART is a simple, exciting, efficient model that provides a rigid framework for VCC implementation (Mukhtar, Ismail, & Yahya, 2012; Skaržauskaitė, 2013; Tanev, 2011).

#### **4.2.1 DART model evaluation**

DART was introduced by Prahalad and Ramaswamy (2004a) because at the time, little research provided evaluations of the model. In a qualitative study of store experiences and co-creation, Spina et al. (2012) use DART as a theoretical framework, suggesting that success of temporary stores in Italy lies in deployment of the four building blocks of interaction. VCC emerges because of interactions and experiential relationships between a firm and customers. Mazur and Zaborek (2014) show that in service and manufacturing companies, DART is not the most appropriate model to represent co-creation. Taghizadeh et al. (2016) develop a scale for DART, applying it to innovation



strategy and market performance. Survey data from 249 telecommunications managers were tested using structural equation modelling (SEM), with results suggesting a strong positive relationship between DART and innovation strategy.

Albinsson et al. (2016) develop a scale for the four constructs in DART using a company view, evaluating service loyalty and shared responsibilities. They investigate whether shared responsibilities relate to high DART assessments, and meaningful evaluations to customer loyalty. A weakness of the study is its sample of 269 university students. Findings suggest a positive association between shared responsibility and DART, but various implications suggested only partial relationships between DART and service loyalty among the four building blocks. Only access interacted with loyalty. Consequently, traditional accommodations industries have not been used as a context for evaluation. This is also the reason DART is appropriate for investigating SDL and VCC in a hospitality context, filling a gap in the literature. However, the current paper acknowledges the role of customers as equal partners during VCC in the dialogical process, and although DART is presented as a firm-oriented model, the model also serves customers. This means that the principles of the four building blocks of interactions apply to all actors equally, an argument that highlights the demarcation between producers and consumers as barely clear (Ramaswamy, 2011). A measurement scale is developed to validate the new model from customers' perspective, providing information on customers and how they perceive VCC with hotels.

#### **4.2.2 VCC in hospitality**

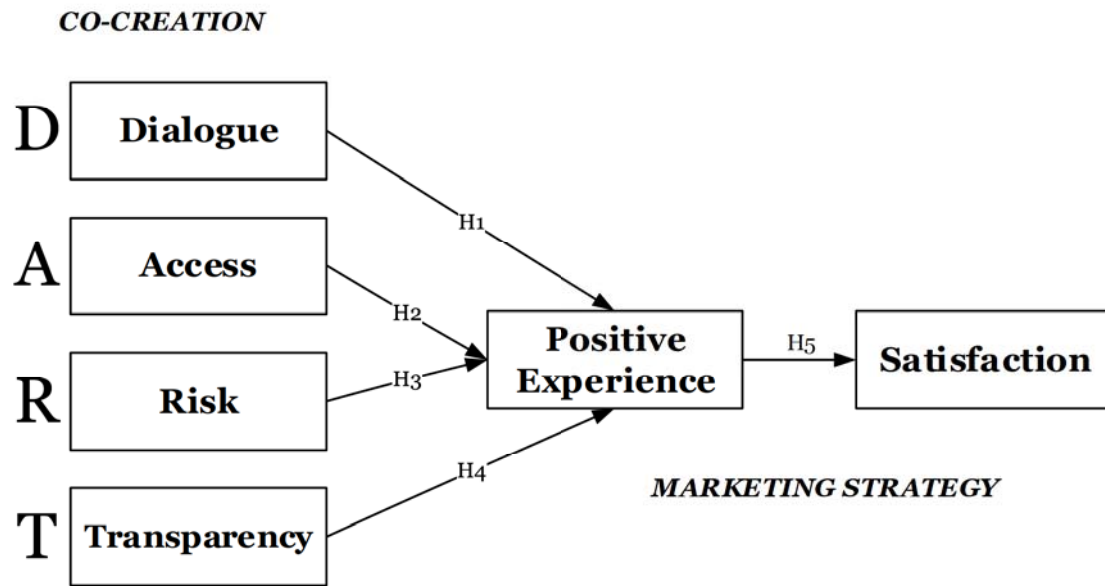
The hospitality industry operates in a dynamic environment in which consumers demand excellent service from skilled personnel, and functional and aesthetic facilities (Ottenbacher & Harrington, 2010). Hospitality value propositions evolved from plain products and amenities, which are homogenous to customised hotel experiences due to advancements in Internet and communication technologies (Neuhofer, 2016; Ernst & Young, 2013). Majboub (2014) suggests,



“Tourism providers need to create experience environments, integrating resources to co-create high-value experience” (p. 27). According to Prahalad and Ramaswamy (2004b), “high-quality interactions that enable an individual customer to co-create unique experiences with the company are the key to unlocking new sources of competitive advantage” (p. 7). Consequently, guest experiences are essential to hotels (Chathoth, Altinay, Harrington, Okumus, & Chan, 2013; Walls, Okumus, Wang, & Kwun, 2011). Customer experiences are also paramount to SDL (Payne et al., 2008; Shaw, Bailey, & Williams, 2011; Vargo & Lusch, 2008) since VCC is experiential (Vargo & Lusch, 2008). However, Ramaswamy (2011) argues that human experiences are what markets are all about, and firms should not be service- but experience-oriented. Experiences come from interactions, and VCC is about creating positive experiences (Ramaswamy, 2011).

VCC and customer experiences interrelate, and VCC is an experience itself. In a hospitality context, opportunities for interactions are numerous and inevitable since production and consumption occur simultaneously (Kandampully, 2006). The experiences perceived from these moments are significant because they generate value and define customer satisfaction (Kandampully, 2006). Despite the significance of customer experience measurement in hospitality and tourism industries, empirical evidence is scarce in that context (Ingram, Caruana, & McCabe, 2017; Khan, Garg, & Rahman, 2015; Ritchie & Hudson, 2009; Walls, 2013). Consequently, application of SDL in a hotel context provides a framework to assess how co-creation enhances guest experiences (Shaw et al., 2011). Use and combinations of the four building blocks of interaction from DART in a hospitality industry might produce compelling experiences. The Figure 1 summarises the current research model and hypotheses.

*Figure 1. Research Model*



#### 4.2.3 Dialogue

Dialogue with a hotel means that guests communicate with the hotel, and vice versa. To promote and encourage dialogue, a firm must offer multiple, diverse channels of communication, allowing customers the freedom to choose the way to interact (Prahalad & Ramaswamy, 2004b). Concerning hotels, that means guests who can interact and communicate at any time through traditional (e.g., direct) dialogues with hotel staff members, and non-traditional communication channels, such websites and mobile applications. Each time actors initiate a dialogue through a communication channel, guest experiences are affected. The quality of communication is significant, and hotels must ensure consistent quality experiences throughout communication channels. Each channel, both traditional and non-traditional, has a unique influence on guest experiences (Prahalad & Ramaswamy, 2004b). For example, a guest can request a wake-up call from a room's desk phone by calling reception, through a smart TV, or in a smartphone application. A variety of options can appeal to each type of guest, satisfying disparate needs and creating positive experiences. However, communication channels alone are insufficient; hotels must also encourage dialogue during which guests perceive that their arguments, suggestions, and complaints are heard (Grönroos, 2004). That

means that there must be feedback procedures that ensure customer involvement during VCC. As a building block of interaction, dialogue is a way not merely to interact, but exchange and share knowledge (Ballantyne, 2004; Grönroos, 2004). Hotel guests interact with dialogue as deep, dynamic engagement, and interactions lead to co-creation (Binkhorst & Dekker, 2009; Prebensen, Vittersø, & Dahl, 2013); the better the quality of the dialogue, the better the co-created experience (Binkhorst & Dekker, 2009). Hotels that offer unique, positive experiences to guests provide a variety of communication channels designed to offer opportunities for dynamic dialogue (Pralhad & Ramaswamy, 2004b). Therefore:

**H1.** *Dialogue with a hotel enhances customers' experiences.*

#### **4.2.4 Access**

Access also enhances customer experience by facilitating more efficient dialogue (Albinsson et al., 2016). Firms provide customers with access to tools and information to co-create the value experience (Pralhad & Ramaswamy, 2004c). Access also juxtaposes ownership (Pralhad & Ramaswamy, 2004c) by providing access to lifestyles and experiences, and disregarding the need to own. With access, hotel guests can ask and shape the experiences they desire dynamically. Hotel guests do not simply buy predesigned services, but pursue positive, exciting experiences through personal involvement and consumption (Neuhofer, Buhalis, & Ladkin, 2015). Thus, through access to information and tools, hotel guests can engage in and design their own experiences, and live them the way they want them. In a hospitality context, access as a building block of interaction is an essential component to providing customised, positive experiences (Neuhofer et al., 2015). Providing access to a hotel's tools and information, such as a reservation system, social media, etc., supports efficient dialogue and therefore a better customer experience (Binkhorst & Dekker, 2009).



Thus:

**H2.** *A hotel's accessibility through customer information and tools enhances customers' experiences.*

#### **4.2.5 Risk**

Accessing information and tools poses co-creation risks for all actors. There is the propensity for hotel managers to communicate only the benefits of a hotel stay, failing to communicate potential risks (Prahalad & Ramaswamy, 2004c). Examples include a pool cleaned with detergents that are environmentally unfriendly and customers ignoring the hotel's evacuation procedures (Nguyen, Imamura, & Iuchi, 2018), risks that might lead to an unpleasant experience. Firms should communicate not only benefits but also potential risks to help customers reach informed decisions and boost trust between them (Prahalad & Ramaswamy, 2004c), a component of customer satisfaction and retention (Kumar Rai & Srivastava, 2012; Prahalad & Ramaswamy, 2004c). Prahalad and Ramaswamy (2004b) argue that the contemporary business environment is characterized by networking and increased customer communication, and therefore customers might discuss risks associated with a service provider in a dedicated community, such as TripAdvisor or Booking.com. Absence of official information regarding risks presents a company as dishonest and unscrupulous. In contrast, timely provision of information about risks through official communication channels allows customers to assess the quality of services and choose a hotel that provides specific information (Prahalad & Ramaswamy, 2004b). If such quality meets customers' value perceptions, they are likely to choose services from an honest company, and have a better guest experience (Prahalad & Ramaswamy, 2004b). So,

**H3.** *Risk assessment by a hotel enhances customers' experiences.*



#### **4.2.6 Transparency**

Transparency is about mutual updating of information during interactions, for both partners (Prahalad & Ramaswamy, 2004a; Spence et al., 2012). It is crucial to genuine dialogue between equal partners that results in a positive guest experience (Prahalad & Ramaswamy, 2004c). Managerial information (e.g., working conditions of hotel employees, implementation of hygiene standards, and identities of food suppliers) might appear too irrelevant to share with guests, but they are paramount for customers to feel as equal partners and engage in VCC (Korun & Mühlbacher, 2013). The degree of a firm's transparency indicates the degree of empowerment the firm desires for customers as value co-creators, and the degree of interaction intensity (Tanev, 2011). However, firms must understand that being transparent is sometimes not an option because Information and Communication Technology empowers consumers to establish transparency since access to information is now much easier (Asmussen, Harridge-March, Occhiocupo, & Farquhar, 2013). A firm's openness facilitates trust, equality, and consequently dialogue, leading to enhanced customer experiences (Prahalad & Ramaswamy, 2004a). Therefore:

**H4.** *Transparency of customer data to a hotel enhances customers' experiences.*

#### **4.2.7 Positive Experience and Satisfaction**

Oh, Fiore, and Jeoung (2007) argue that experience is an important construct in hospitality and tourism research, defining it as an enjoyable, engaging, memorable encounter. The experience of a tourist consumer is "the subjective mental state felt by participants" (Otto and Ritchie, 1996, p. 166). Adhikari and Bhattacharya (2016) conduct a review of tourism consumers' experiences, finding that it is necessary to deepen research. The authors distinguish two field of study: (i) experience as a

product attribute or a complete product; and (ii) consumer experience created due to customer interactions with a physical environment or people. In an SDL context, it is more accurate that customer satisfaction centres on evaluation of experiences through interactions with several service areas (Xiang et al., 2015).

Extant studies analyse the direct effect of the value of co-creation on satisfaction (Grissemann & Stokburger-Sauer, 2012; Mathis, Kim, Uysal, Sirgy, & Prebensen, 2016; Prebensen & Xie, 2017), particularly regarding loyalty (Mathis et al., 2016; Polo Peña, Frías Jamilena, & Rodríguez Molina, 2014; Prebensen & Xie, 2017). However, little empirical evidence relates tourists' co-creation value with travel experiences (Mathis et al., 2016). Only Albinsson et al. (2016) propose the effects of DART on the construction of loyalty in a study conducted with 269 university students who bought products predominantly from telecommunications, cable TV, and computer hardware companies. The authors find significant results in relation to access, which affected consumer loyalty exclusively. Research does not, however, provide empirical evidence regarding relationships with value of co-creation with guest experiences, or tourist experiences generally. Therefore, it is plausible that consumer value co-creation, and specifically DART, has indirect effects on satisfaction and loyalty through customers' positive experiences. Superior and quality customer experiences are essential to customer satisfaction and loyalty (Grewal, Levy, & Kumar, 2009; Jaakola, Helkkula, & Aarika, 2015) since "guest satisfaction can be seen as the guest's evaluation of his/her experience through interaction with various service areas" (Xiang et al., 2015, p. 122). Satisfaction occurs when a customer's expectations of a good or service are met (Oliver, 1997). Thus, being involved and engaged during co-creation can be enjoyable and enhance customer satisfaction (Chen & Wang, 2016; Ranjan & Read, 2014). Using customer reviews from Expedia.com as representative of hotel guests' experiences, Xiang et al. (2015) assess whether such experiences affect guest satisfaction. Results suggest a strong, positive relationship between positive experiences and satisfaction. Consequently:

**H5.** *Positive customer experiences relate to customer satisfaction.*

### **4.3 Methodology**

Multiple items were used to measure the DART–VCC model. For dialogue and access, four items for each were used from Albinsson et al. (2016) and Taghizadeh et al. (2016). For risk, four items were adapted from Albinsson et al. (2016) and Mazur and Zaborek (2014), and for transparency, another four were used from Albinsson et al. (2016). Items that constituted DART in their original form were firm-oriented, and were thus adapted to a customer's perspective. To measure positive experiences, four items were constructed according to a VCC literature review and hotels' moments of truth (Chathoth et al., 2013; Xiang et al., 2015). Satisfaction was measured using four items from Grisseman and Stokburger-Sauer (2012). In total, 24 items measured six constructs, assessed using a Likert-type scale that ranged from totally disagree (1) to totally agree (5).

### **4.4 Data collection and sampling**

A questionnaire was designed and divided into two parts. The first collected demographics, and the second contained the measurement items. The sample included travellers at an airport while waiting for outbound flights. The travellers had to have stayed at a hotel before their trips to complete the questionnaire, and questionnaires that resulted from a pilot study were administered at the International Airports of Athens and Corfu. Four hundred eighty-four questionnaires were administered. To perform an econometric analysis, structural equation modelling (SEM) was chosen for its capacity to model latent variables. SEM usually requires a large sample, and the typical sample consists of 200 cases (Crockett, 2012; Kline, 2011). However, Henson and Roberts (2006, p. 402) suggest that “the best rule of thumb to follow is to get the largest possible sample for a factor analysis.”



A large sample decreases the drawbacks of SEM concerning statistically inferior estimates regarding those found using full-information estimates, such as maximum likelihood in SEM (Kline, 2011). Responses were treated statistically using AMOS v22. To avoid problems during data collection, a pilot study was conducted at the International Airport of Thessaloniki.

Questionnaires were administered to travellers who had stayed at a hotel just days before their departures. The questionnaires were collected in a single day, and 44 passengers met the criteria. The number of questionnaires was adequate since a pilot survey requires only a small sample from the population (Bhattacharjee, 2012). The pilot study revealed minor syntax errors, which were subsequently corrected.

#### **4.5 Demographic data**

Among respondents, 53% were male and 47% female, and ages ranged from 14 to 24 years (17% of the sample), 25 to 34 (25%), 35 to 49 (24%), 50 to 64 (25%), and 65 and older (9%). Most travellers held a postgraduate degree (42%), 28% finished tertiary education, 26% completed secondary education, and 5% completed primary education. Nearly half of respondents were U.K. citizens (240), followed by Germans (10%), Polish and Greeks (5%), and other (less than 5%). Most travellers stayed in a 4-star hotel (44%), and the remainder were divided equally between 3- and 5-star hotels. Most travelled as a family (47%), with the rest responding “other” (41%) or travelling alone (10%). Most respondents were leisure travellers (74%), and 13% were travelling for reasons other than those available on the questionnaire. Business travellers were 7%, and health travellers were 4% (Table 1).



*Table 1. Respondent Demographics*

<b>Gender</b>	<b>N</b>	<b>%</b>	<b>Type of trip</b>	<b>N</b>	<b>%</b>
Male	225	53	Single	49	10
Female	258	47	Family	225	47
<b>Age</b>	<b>N</b>	<b>%</b>	Other	198	41
14-24	82	17	<b>Reason for Travel</b>		
25-34	119	25	Business	33	7
35-49	118	24	Leisure	356	74
50-64	121	25	Health	20	4
65 or above	42	9	Other	63	13
<b>Education</b>	<b>N</b>	<b>%</b>	<b>Country*</b>	<b>N</b>	<b>%</b>
Primary	23	5	Germany	48	10
Secondary	116	26	England	240	50
Tertiary	137	28	Greece	26	5
Postgraduate	205	42	Poland	26	5
<b>Hotel Stars</b>	<b>N</b>	<b>%</b>	Other	144	30
3 stars	135	28			
4 stars	215	44			
5 stars	133	28			

\* Countries with less than 5% categorised as "Other."

## 4.6 Analysis of results

Before testing the hypotheses, the constructs were assessed for validity and reliability using confirmatory factor analysis (CFA). Regarding construct validity (Bhatnagar, Kim, & Many, 2014), Table 2 shows that values obtained exceeded the threshold of 0.70 for confirmatory research, and 0.40 for exploratory studies, as is this case (Hair, Anderson, & Tatham, 2010). Convergent validity of the measurement model was assessed using average variance extracted (AVE) and composite reliability (CR) (Fornell & Larcker, 1981). Convergent validity indicates how closely a measure relates to a construct (Bhattacharjee, 2012). Acceptable values for AVE and CR are above 0.5 and 0.7, respectively (Fornell & Larcker, 1981). Values for all constructs exceeded these values (Table 2).

Reliability was evaluated using Cronbach's alpha coefficient as a measure of internal consistency (Bhattacharjee, 2012). The value for satisfaction was 0.9. For access, dialogue, risk, and transparency, values exceeded 0.7, and for positive experience, the coefficient was 0.6 (Bhatnagar et al., 2014).

CFA and the structural model (SM) were estimated using AMOS v22. Dimensions of DART were assessed in relation to positive experiences, and positive experiences was assessed regarding satisfaction (Table 3). We assessed the fitness of the model using indices from the three categories of model fit, according to Hair et al. (2010). In the category of absolute fit, results suggest good fit, with a GFI of 0.908 (an acceptable value is 0.9; Jöreskog & Sörbom, 1984), and RMSEA of 0.060 (an acceptable value is less than 0.08; Browne & Robert, 1993). In the category of incremental fit, CFI, TLI, and NFI were above 0.9, which is adequate according to Bentler (1990), Bentler and Bonett (1980), and Bollen (1989). In the third category of parsimonious fit, chi-squared/df was 2.768, within the acceptable range of less than 3.0 (Marsh & Hocevar, 1985). Table 3 summarises structural model results.

*Table 2. Constructs and Results*

Variables	$\lambda$	$\alpha$	AVE	R
<b>Dialogue with hotel</b>		<b>0.837</b>	<b>0.655</b>	<b>0.882</b>
Active dialogue with staff	0.802			
Encouraged to express thoughts	0.702			
Opportunity to share ideas	0.798			
Use of different communication channels	0.920			
<b>Access to hotel</b>		<b>0.805</b>	<b>0.628</b>	<b>0.869</b>
I decide how to receive the services	0.793			
Many options to choose how to experience the service	0.876			
I could receive the service when, where and how I want it	0.835			
Opportunity to share in the design process of service	0.646			
<b>Risk with hotel</b>		<b>1</b>	<b>1</b>	<b>1</b>
I received information to evaluate the benefits and risks of the hotel's services.	<b>1</b>			
I was fully informed about the risks and advantages of the hotel's service.	<b>1</b>			
The hotel was very clear and factual about both the negative and positive factors of the services.	<b>1</b>			
I was given advises on how to use hotel services	<b>1</b>			
<b>Transparency of hotel</b>		<b>0.812</b>	<b>0.634</b>	<b>0.772</b>
I had all the information needed to improve the outcomes of the service experience.	0.886			
I had open access to information to enhance the overall service experience.	0.885			
I was treated as an equal partner in sharing information	-			
The information provided by the hotel was up-to-date	0.428			
<b>Positive experience with hotel</b>		<b>0.626</b>	<b>0.606</b>	<b>0.788</b>
Positive experience with room service	0.840			
Positive experience with reception	0.876			
Positive experience with hotel staff	0.946			
Positive experience to find the hotel	-0.236			
<b>Satisfaction</b>		<b>0.933</b>	<b>0.646</b>	<b>0.872</b>
Satisfied with the customer service	0.410			
My stay at this hotel has met my expectations	0.894			
My interaction with the hotel was satisfactory	0.905			
I was satisfied with the hotel	0.894			

Note:  $\lambda$ =loadings;  $\alpha$ =Cronbach's alpha coefficient; R=composite reliability

*Table 3. Structural Model Results*

Hypotheses	Effect	B	S.E.	t-value	p-value	Support	R <sup>2</sup>
<i>Dialogue→Positive Experience</i>	+	-0.078	0.046	-1.706	0.088	No	
<i>Access→Positive Experience</i>	+	0.182	0.051	3.544	***	Yes	
<i>Risk→Positive Experience</i>	+	0.087	0.070	1.240	0.215	No	
<i>Transparency→Positive Experience</i>	+	0.467	0.089	5.269	***	Yes	0.52
<i>Positive Experience→Satisfaction</i>	+	0.906	0.970	9.321	***	Yes	0.79
<b>Model Fit</b>	<b>CMIN/DF</b>	<b>GFI</b>	<b>NFI</b>	<b>CFI</b>	<b>TLI</b>	<b>RMSEA</b>	
Results	2.768	0.908	0.928	0.952	0.953	0.060	
Recommended	p<3	>0.9	>0.9	>0.9	>0.9	<0.08	

Results of structural model analysis suggests that components of DART affected positive experiences only partially. Dialogue correlated negatively ( $B=-0.078$ ,  $p=0.88$ ) on the positive experiences of guests. Risk ( $B=-0.87$ ) had no effect on positive experiences ( $p=0.215$ ), and thus H1 and H3 were not supported. However, transparency ( $B=0.467$ ) and access ( $B=0.182$ ) correlated positively, supporting H2 and H4. Results also suggest a strong correlation between positive experiences and satisfaction ( $B=0.906$ ), supporting H5.

#### **4.7 Conclusions**

This study contributes to theoretical and methodological advancements of SDL by analysing VCC in the hospitality sector. DART is used to investigate the dynamics of VCC, and whether engagement and involvement by customers at a hotel's services offering generates positive experiences and satisfaction. VCC embeds experiences, and the more positive the experiences are for customers, the more satisfied they are with a hotel. The originality of this paper lies not only in evaluation of DART in a traditional hospitality context, but in analysis of the model from a customer perspective. This study tests the reliability and validity of the DART scale in the hotel industry from a consumer perspective, since extant research evaluates it from a business perspective. This study is one of few to validate and test DART from a customer perspective among hotel guests. Lazarus et al. (2014) argue that DART provides a more important dynamic and bi-directional perspective that is based on interactions between company and client, which themselves are based on service encounters. Research demonstrates that many measurement scales exist in customer co-creation of value. However, much research criticises them due to multidimensionality and colossal extensions, which result in difficulties with application and validation (Busser & Shulga, 2018; Ranjan & Read, 2014; Verleye, 2015; Yi & Gong, 2013). In cases of smaller scales, the primary difficulty is multidimensionality (Grissemann & Stokburger-Sauer, 2012; Mathis et al., 2016; Polo et al., 2014).



Following Yi and Gong (2013), we construct an abbreviated scale based on DART to benefit researchers. Thus, the current study enriches and consolidates VCC–DART theory.

Regarding the current sample, few studies assess tourists (Frías Jamilena, Polo, & Rodríguez, 2017; Grisseman & Stokburger-Sauer, 2012; Mathis et al., 2016), and no study adapts a VCC scale to the hotel sector. According to hospitality industry literature (Grewal et al., 2009; Xiang et al., 2015) and current results, a robust relationship exists between positive experiences and satisfaction, though not all components of DART lead to positive experiences for hotel clients. Consistent with Albinsson et al. (2016), dimensions of DART only partially influence customer loyalty; those authors suggest that only access has positive effects on customer loyalty. In the current study, dialogue and risk did not contribute to excellent guest experiences, in contrast to access and transparency. These results are attributable to the context of traditional hotels, and specifically to seaside resorts, where guests buy time off of their routines to relax. Any need to contact hotel staff usually results from something that is not agreeable, which is the case with risks affecting positive experiences. Communicating potential risks to resort hotel guests that a tour operator did not communicate might explain why it does not contribute to positive experiences. Relating a risk to a customer who spent a significant amount of money to relax and escape routine might lead to negative associations, even if the hotel staff informed the risk in good faith. An example is a receptionist who informs a guest about stray dogs outside the hotel during the night, or spiders in their bungalows. These risks do not contribute to positive experiences and VCC. Nevertheless, results suggest that the building blocks of interaction partially create positive experiences.

Indirect relationships of dialogue and risk might exist in a way that these two dimensions affect or are affected by transparency and access. Albinsson, Perera and Sautter (2016) argue that DART's components are co-dependent when creating an organisational climate that is conducive to strategic VCC; “dialogue is critical but meaningful, the genuine exchange cannot occur in the absence of access or transparency” (p. 44). In the same way, the latter two components allow evaluations of

risks associated with goods and services in hotels. Therefore, the two primary dimensions of DART, from a consumer perspective, are access and transparency. The other two components can be understood more directly from a hotel's perspective. Hotel VCC-strategies should emphasise developing access and transparency to favour positive customer experiences. Therefore, we suggest a paradox, where dialogue and risk assessment influence guests' experiences positively, and value co-creation relates to customers' positive experiences. One explanation is the nature of traditional hospitality industries, specifically resort hotels in comparison to urban hotels. Another explanation is the composition of the sample, since most questionnaires were collected in Corfu (69%). Foreign tourists commonly travel there for leisure (78%), and purchases are made from major European tour operators, which include packages with all expenses paid. Zouni and Kouremenos (2008) argue that tour operators increase interactions with customers to stimulate contributions to the design, production, and consumption of vacations, meaning that tourists' trips are prearranged, and potential for dialogue with hotels occurs with travel agents before departure.

During guests' stays, most communication revolves around emerging matters, and therefore opportunities for engagement occur with tour operators through tour guides or tour operators' representatives (Wang, Hsieh, & Huan, 2000). Communication and engagement with a front office or hotel staff concern emergencies such as malfunctioning air conditioning, poor WIFI signals, etc. Thus, contact with the hotel implies that accommodations and services are not as a tour operator suggested, and associates with something negative. This is also the case for risks that affect positive experiences. Communicating potential risks to hotel guests that a tour operator did not mention might explain why it does not contribute to positive experiences. Revealing potential risks to customers who spend a large amount of money to relax and escape routine might also lead to negative associations, even if hotel staff members inform guests in good faith. Hotel customers do not need to assess dangers during their stays. Prahalad and Ramaswamy (2004b) argue that combining the building blocks of transparency, risk assessment, access, and dialogue enable companies to engage customers as

collaborators better. Hence, hotels can combine two DART building blocks to create new, vital capacities—access and transparency. This coupling enhances a consumer's ability to make informed choices (Prahalad & Ramaswamy, 2004b). Albinsson et al. (2016) suggest that such combinations should be explored in future research.

#### **4.8 Implications**

The originality of this paper lies in evaluating DART from a customers' perspective, which can help managers improve their understanding of VCC, and redesign hotel services and operations. VCC strategies require hotels to use experience-centric logic, in which each interaction with a customer contributes to positive experiences and therefore a satisfied customer. Although DART is flexible, allowing firms to use combinations of the four building blocks of interaction, this study suggests that access and transparency influence customers' positive experiences. It is a prerequisite for customers to trust a firm and have access to hotel services and information. VCC strategies mean that hotel managers should invest in technologies that allow customers to have access and make informative decisions on how, when, and where to receive hotel services. Increasing transparency in every aspect of hotel management enables trust-building, a compulsory element for dialogue and thus VCC. The model reveals strengths and weaknesses of methods employed for interactions with guests, since the model uses a customer perspective. Managers should evaluate a hotel's openness to guests, and possibilities and offerings for co-creation. Consequently, hotels must provide customers with access to tools and information to co-create value experience. DART offers a path to enhanced interactions between firms and customers, but more research is needed regarding types of accommodations and guests.



## 4.9 Limitations and future research

This study uses a sample of tourists that had already stayed in hotels. Other situations should be analysed to assess disparities at other moments during a customer's purchase. Frías, Polo, and Rodríguez (2017) argue that the effects of CCV should be investigated before a hotel stay (e.g., during hotel reservations), and during the stay at a hotel. This way, researchers can analyse phases of interactions between customers and hotel employees. Another limitation is the context of traditional hotels, especially seaside resorts, at which guests buy time off of their routines to relax. Research should examine other types of accommodations, such as luxury hotels, types of guests, such as business tourists, and other tourists at other destinations and in other industries, such as air transportation, tourist attractions, and car rentals. Following Prahalad and Ramaswamy (2004b), combinations of the four dimensions of DART, and their effects on other constructs, such as quality of service, brand image and customer loyalty, should be examined.

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## **CHAPTER 4**

### **Value co-creation and exchange value in the hotel industry in Greece**

#### **Abstract**

In the hospitality industry context, our research aims to contribute to the understanding of the specific determining characteristics of value co-creation (VCC) of a customer's value perception, such as perceived price and perceived quality. The DART (Dialogue, Access, Risk, Transparency) approach constitutes our central framework of VCC. In two major international airports in Greece, data was picked up via self-administered questionnaires. Four hundred and eighty-four tourists on their return home make up the sample of the study. Through Structural Equation Modeling, we tested our research hypotheses. Our results indicate that Transparency and Risk affect a hotel guest's perceptions about price and quality, while Access only determines the quality. Contradictorily to what we expected, Dialogue did not have a positive influence on the perceived price or perceived quality. Finally, our results support the notion that perceived quality affects the perceived price as well.

**Keywords:** Value co-creation, marketing strategy, perceived price, perceived quality, hotel industry, DART model

## 5.1 Introduction

In a continually changing modern business environment, the hospitality industry must subsequently adapt its marketing strategies to satisfy customers' preferences in order to remain competitive. One of the ways to remain competitive is to rely on external resources, especially when considering that digitisation, connectivity, and globalisation make these resources more available now than ever (Luu, 2017).

Prahalad and Ramaswamy (2000) were among the first to recognise customers as a source of competence because they understood the influence of the Internet with regard to the relationship between a firm and its clients .

Value Creation (VC) indicates a single crucial point, although VC necessitates having two or more participants and is fundamentally a good model (Malhotra, Lee, & Uslay, 2012). As Vargo, Maglio, and Akaka (2008) suggest, traditional VC models are focussed on the firm's output and price. Instead, VCC happens cooperatively when both clients and companies contribute to generating value (Chathoth, Altinay, Harrington, Okumus, & Chan, 2013). Likewise, VCC is the active engagement of the consumers, with their capabilities and knowledge, in the process of service (Prahalad & Ramaswamy, 2000, 2004b, 2004c). It is a value that only the beneficiary can define and experience (Vargo & Lusch, 2008). Consequently, the value created has personal characteristics from every involved customer, while each customer develops unique perceptions of that value.

Value perception is vital in the hospitality sector since it is a service-based industry with international customers with different cultural values. Differences in the perception of value from the expected value can have different effects on a customer's behaviour. For instance, the quality of services of a three-star hotel can be perceived by a customer as four- or two-star services. Perceived value (PV) has been characterised by many as the critical determinant of a successful firm since customers make choices based on that value perception (Zeithaml, 1988; Cronin, Brady, & Hult, 2000; Eggert & Ulaga, 2002; Korda & Milfelner, 2009; Aulia, Sukati, & Sulaiman, 2016).

Over the years, customer perceived value has received great interest in hospitality- tourism research. As Sun, Chi, and Xu (2013) have shown, PV fulfils a vital role in tourists' decision making and has an effect on their satisfaction and loyalty. The conceptual approaches to perceived value have been very diverse (Sánchez-Fernández & Iniesta-Bonillo, 2007; Gallarza, Gil Saura, & Arteaga Moreno, 2013; Aulia et al., 2016; Arslanagic-Kalajdzic & Zabkar, 2017). As Dedeoğlu, Balıkcıoğlu, and Küçükergin (2016) indicate, there are two essential approaches to PV: in the traditional approach, value is based on a functional character, while the second approach considers it through a multidimensional structure. In general, the most common approach in the literature has considered the value perceived from a functional and utilitarian point of view. This cognitive approach of exchange between benefits and sacrifices is the one that has controlled the field of transactional marketing (Holbrook & Hirschman, 1982; Sánchez-Fernández & Iniesta-Bonillo, 2007; Arslanagic-Kalajdzic & Zabkar, 2017). This approach advocates that quality and price are the primary antecedents of PV (Zeithaml, 1988; Ravald & Grönroos, 1996; Kashyap, 2000; Arslanagic-Kalajdzic & Zabkar, 2017). Therefore, without doubt, both price and product quality are two key strategic variables in the traditional marketing paradigm or transactional-oriented approach.

These characteristics – price and quality – are crucial for the hospitality industry where the services are quite homogeneous since all the hotels provide accommodation and catering. When the customer's perception of the providers' service quality is the same, price takes the leading role in the customer's choice. Consequently, although the customer is nowadays an essential source of competence for modern businesses, not much research has been done on the consequences of VCC with regard to the client's perception of price and quality of service.

Yet, the hospitality-tourism literature in the tourist-consumer context is in its first stages (Campos, Mendes, do Valle, & Scott, 2016; Chathoth, Ungson, Harrington, & Chan, 2016; Park & Ha, 2016). There is ongoing research focussed on the results of hospitality and tourism VCC (C. Morosan, 2015). Concerning the VCC effects on satisfaction, there is scientific evidence that supports



this relationship (Mathis, Kim, Uysal, Sirgy, & Prebensen, 2016; Prebensen & Xie, 2017). Also, VCC vs. loyalty (Polo, Frías, & Rodríguez, 2014; Mathis et al., 2016; Prebensen & Xie, 2017). However, there is little empirical evidence that relates tourist co-creation value with the perceived value in the hospitality-tourism industry (e.g. Dedeoğlu et al., 2016; Prebensen & Xie, 2017; Reichenberger, 2017), and research is still scarcer in the specific field of the hotel industry (e.g. (Morosan, 2015; Morosan & DeFranco, 2016). Therefore, our search will address the following research questions:

At a general level:

*Would VCC affect hotel marketing strategies?*

At a specific level:

*Would VCC affect customers' perception of the price and quality of services offered for a hotel?*

*Does perceived quality affect the perceived price of services offered for a hotel?*

To explore the effect of VCC in the hospitality industry, we employ the DART model (Dialogue, Access, Risk Transparency) approach. The DART model was introduced by Prahalad and Ramaswamy (2004b) as a road map for firms to engage customers in VCC. It consists of four-dimensions: Dialogue, Access, Risk, and Transparency, which can be combined in different ways for optimal results. The DART model is being used to test whether customer Price and Quality perceptions are affected by VCC. The DART model, although a firm-oriented model, will be investigated from a customer's perspective to serve the needs of the specific research. That is in line with value co-creation principles which require that all the actors involved be equal. As Solakis, Peña-Vinces, and López-Bonilla (2017) affirm, there are still very few studies that have applied and evaluated the DART model. Thus, the hospitality industry is encouraged to develop studies in this field due to the lack of empirical research carried out up to today (Morosan, 2015; Chathoth et al., 2016).



This study aims to integrate the traditional marketing or transactional marketing approach with the postmodern consumer-oriented marketing approach. Postmodern consumers are defined as people who transform the environment in which live instead of adapting themselves to it (López-Bonilla & López-Bonilla, 2009) and, therefore, are more associated with a client's VCC approach. In terms of creating value, the objective of the commercial exchange is to manufacture and supply outputs for selling (Vargo, Maglio, & Akaka, 2008). In this 'exchange-value' perspective, the 'producer' determines the value (Wiltshier & Clarke, 2017). In the value of the co-creation paradigm, goods are service distribution vehicles, and the value depends upon the beneficiary (Holbrook, 1988; Vargo et al., 2008), who can be identified as the postmodern consumer.

The originality of our manuscript is the fact that for the first time a study establishes the connection between the paradigms of VC and VCC. The application of VCC is of great importance in the tourism-hospitality context, given its idiosyncrasy (Cabiddu, Lui, & Piccoli, 2013) and its intrinsic nature as a potentially proactive service supplier (Chathoth et al., 2016). However, as we have mentioned in previous paragraphs, research on VCC in hospitality and tourism is particularly limited. Therefore, in the tourism-hospitality context, our study undertakes to fill this gap.

## **5.2 Research Model**

The service-dominant logic established that the VC procedure of a firm is an effect of efforts of multiple stakeholders. Prahalad and Ramaswamy (2004b, 2004c) considered customers to be the most important group of such stakeholders and formulated their DART model based on this assumption. It is no wonder that Prahalad and Ramaswamy (2004b) have adopted such a pattern since the concept of customer-centric marketing represents an established niche in marketing science. For example, Sheth, Sisodia, and Sharma (2000) stated the necessity of client-central approach in 2000

and identified such trends in marketing science as “customer outsourcing, co-creation, marketing, fixed-cost marketing, and customer-centric organisation.” (p.55)

Drucker (1954) and Levitt (1984) also noted the necessity of focussing on customer needs. In particular, Drucker (2011) wrote: ‘it is the customer who determines what a business is, what it produces, and whether it will prosper’ (p. 90). Levitt (1984) insisted that companies must pay attention to satisfy customer needs instead of only selling products. Shah et al. (2006) showed the trend of consumer-centricity still dominates marketing theory, which is why it is not surprising that Prahalad and Ramaswamy (2004b) came up with their DART approach.

Prahalad and Ramaswamy (2004a) emphasise that VC depends on negotiation between a company and its customers. The lack of differentiation makes customers buy smart and cheap, thus contributing to the increased commoditisation of products and services. Those companies that do not want to be a part of this value-destroying process must comprehend co-creation with their clients and influence their perception by cultivating deep customer engagement. Prahalad and Ramaswamy (2004c) suggested that VCC depends on the interactions of four elements (e.g., Dialogue, Access, Risk and Transparency) amongst a firm and its consumers. These interactions are defined in the next table:

***Table 1: DART definition***

<b>D</b>	<i>Dialogue. Implies interactions, deep engagement, and the ability and willingness to act on both sides.</i>
<b>A</b>	<i>Access. Refers to the full provision of information to customers from the company.</i>
<b>R</b>	<i>Risk. Refers to some risks associated with the products or services provided by companies.</i>
<b>T</b>	<i>Transparency. Implies management of the information flows between the company and its customers in a transparent manner.</i>

Skaržauskaitė (2013) noted that the DART model is the only type of theory that attempts to address the theoretical and empirical gap of companies' challenges in the co-creation process aside from the theory of Tapscott and Williams (2006). This theory focusses on internal rather than external organisational factors, which makes it less relevant in today's global context where more and more firms are exposed to an increasing number of external factors.

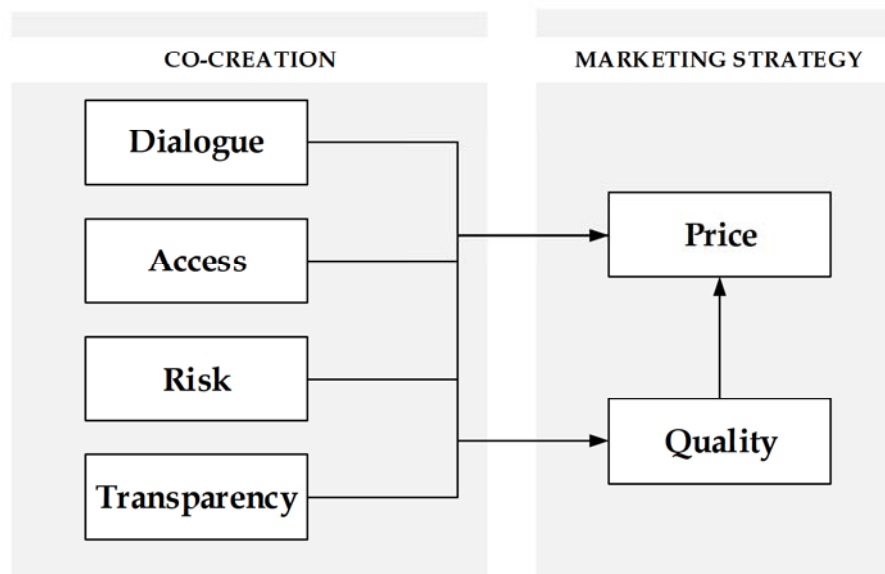
Moreover, although Prahalad and Ramaswamy (2004b) give an incentive for their theory's empirical testing by making bold statements, such as "customer pays according to her utility rather than according to the company's cost of production" (p. 6–7) and "consumers can choose the firms they want to have a relationship with based on their views of how value should be created for them" (p. 6), not many attempts to do that have been made. Among such attempts, it is possible to identify the qualitative research of Spina et al. (2012), who used DART model as an independent variable to study the store experiences of customers. The investigation of Mazur and Zaborek (2014) examined the internal validity of the model; the research of Albinsson, Perera, and Sautter (2016) examined the impact of DART building blocks on service loyalty and shared responsibility; the research of Taghizadeh et al. (2016) focussed on the impact of the DART model on innovation strategy and market performance; and the research of Schiavone, Metallo, and Agrifoglio (2014) studied the effect of DART building blocks on firms' social media strategies.

However, no attempts were made to study the influence of the DART model on customers' perception of price and service quality. This trend is surprising because Prahalad and Ramaswamy (2004a, 2004b, 2004c) have directly pointed at this fundamental relationship, mainly zeroing in on the impact of the DART model on the customer's perception of price and, consequently, quality. As pointed out by Kotler and Keller (2012) and Arslanagic-Kalajdzic and Zabkar (2017), customers perceive higher-priced products as more high-quality, which is an essential part of premium pricing strategy. DART elements can be used to communicate the information about the quality and price of hotel services, thus influencing customer perceptions about them.



Thus, our research objective is to cover the literature gap in understanding how these strategies can be actualised by focusing on the impact of each particular building block of the DART model on the price and quality of services, using the specific example of the hospitality industry (Figure 1).

*Fig. 1. Proposed conceptual framework*



### *Perceived Price*

According to Jacoby and Olson (1977), the price can be objective, representing the monetary figure of a service, or subjective, representing the customer's assessment of information on a service. Perceived price is significant as it determines the acceptable objective price (Oh, 2003), while it is often used as a signal of quality (Oh, 2003; Arslanagic-Kalajdzic & Zabkar, 2017). The perceived price consists of the monetary element, the non-monetary element, and aspects such as time, effort, convenience, and search costs (Zeithaml, 1988; Chang & Wildt, 1994; Kashyap, 2000). For the hospitality context, a single price usually represents a bundle of services (Chathoth et al., 2016) for which the customer might have actively engaged in a VCC process. However, the active engagement of the consumers in each of the bundled services might have variations in their dynamics (Chathoth



et al., 2016), generating different perceptions for the customers and concerns for the hotel managers. Herein lies the reason to study customer's perceived price after a VCC process.

### *Perceived Quality*

According to Zeithaml (1988), quality in a broad sense means superiority or excellence, while perceived quality is the judgement of a consumer on the superiority of an output or a service. Perceived value (PV) is subjective and uniquely determined by each customer. However, it needs a dynamic engagement with the provider to understand quality (Eriksson, Majkgård, & Sharma, 1999). PV is significant in a traditional hotel context because one of the things that signal a hotel's quality is the star rating system (Yang, Mueller, & Croes, 2016). Yet, on many occasions, the customer's perceived quality differs from the quality stated by using the star rating system. There is an abundance of research on perceived quality in the hospitality context (Yang et al., 2016). However, there is no previous research to our knowledge of the effect of VCC on the customer's quality perception.

### *Dialogue*

The hypotheses that the dialogue element of the DART model has a direct influence on price and quality of services stem directly from the definition of this element by Prahalad and Ramaswamy (2004b, 2004c), as well as the nature of today's information-intensive marketplace. However, companies can influence the perception of customers with regard to the place of accommodation and its price by cultivating a productive dialogue with customers. Dialogue is a deep interactive engagement where actors involved are willing to act and change (Prahalad & Ramaswamy, 2004c), while Ballantyne (2004) states that dialogue is '... an interactive process of learning together' (p. 117). Accordingly, dialogue as a learning process means that the involved actors have the chance to gain knowledge and create new knowledge (Prahalad & Ramaswamy, 2000; Grönroos, 2004). Within the

perspective of the Service –Dominant Logic (SDL), marketing is a “structurer” of relationships, encounters, and dialogue (Payne, Storbacka, & Frow, 2008).

Consequently, a sincere and active dialogue has the power to affect customers’ perception of the price and quality of hotel services. It is crucial for this dialogue to occur and for a hotel to have a variety of communication channels. Although having many channels of communication does not necessarily mean that active dialogue will take place, nonetheless the more the channels and the opportunities to communicate, the more the chances to initiate an active dialogue (Ballantyne, 2004; Grönroos, 2004).

Conversely, not all forms of dialogue will positively affect customers’ perception of hotel services and, as Grönroos (2004) noted, companies must express genuine interest in dialogue, create an inclusive atmosphere, and ensure that the feedback is considered. From a customer’s perspective, that means that the customer’s information, thoughts, and proposals are taken into account by the hotel, and the service provided addresses the customer’s needs.

We hypothesise that the consumer’s perception of price and quality can be improved with a reciprocal dialogue between a firm and consumers.

Thus,

***H1a:** Dialogue will have a positive impact on a hotel’s price marketing strategy.*

***H1b:** Dialogue will have a positive impact on a hotel’s quality marketing strategy.*

*Access*

The omnipresent access to information concerning the prices of competitors and the types of services they provide make the provision of such online information as an industry standard. Internet platforms such as TripAdvisor, Yelp!, Booking.com, and many others allow customers to assess their place of stay efficiently and without any time constraints. They also allow for the careful planning of the trip, making it less likely for a firm to be chosen by most customers if it does not readily provide

full information about the services it provides. Furthermore, the modern tourism industry has become a highly information-intensive industry, heavily dependent on information and communication technologies (Buhalis & O'Connor, 2005; Neuhofer, Buhalis, & Ladkin, 2015).

Like dialogue, access impacts the way customers perceive the quality and price of touristic services. Such factors as the ability to decide how services are offered, the ability to choose between options regarding how to involve a particular service, the ability to select the most convenient time to receive particular services, and the opportunity to share customers' opinions about how specific services must be provided all cultivate customer engagement. Rather and Sharma (2017) noted that the provision of pertinent, attractive or personal information to the customers could increase their attention and improve their loyalty. On the other hand, loyal clients are less price-sensitive and perceive far better the products-services quality as a part of their positive brand-image experience (Rao & Monroe, 1988; Krishnamurthi & Raj, 1991; Srinivasan, Anderson, & Ponnnavolu, 2002; Umashankar, Bhagwat, & Kumar, 2017). In this way, it becomes possible to hypothesise that by providing pertinent and personal information about their hotel, as well as by proposing to offer customers the option of voicing their opinions on how to improve their hotel services, firms can impact customer perception of the quality and prices of their services.

Moreover, firms can use a technique of price signalling discussed by several authors (Lancioni & Gattorna, 1992; Baltas & Saridakis, 2009; that relies on premium pricing strategy to signal the higher quality of their production. According to Hinterhuber and Liozu (2018), we can define a pricing marketing strategy as the strategy that could impact both pricing competition and consumer value. Such a strategy can be actualised by providing ready access to the prices of hotel services, as well as the detailed description of such services on the relevant online sources.

Therefore:

*H2a: Access will have a positive impact on a hotel's price marketing strategy.*



*H2b: Access will have a positive impact on a hotel's quality marketing strategy.*

### *Risk*

While access to all relevant information forms an essential part of customer perception of a particular hotel, risks form a separate informational category identified by Prahalad and Ramaswamy (2004a, 2004c). Customers must know what the possible inconveniences of visiting a particular hotel are, in addition to its benefits. Therefore, any possible risks must be communicated very clearly, and the personnel of the hotel should advise its customers about how to use its services to avoid possible insecurities (Oskam & Boswijk, 2016; Nguyen, Imamura, & Iuchi, 2018).

To trust is to tolerate inherent risk in a relationship between customer and firm (Sheppard & Sherman, 1998) and, therefore, trust can relieve perceived risk and customer uncertainty (Swanson, Davis, & Zhao, 2007; Kim, Chung, & Lee, 2011; Ponnepureddy et al., 2017). Trust is an essential element linked to customer satisfaction and retention (Singh & Sirdeshmukh, 2000; Ranaweera & Prabhu, 2003). However, should the hotel fail to communicate the information about possible risks to its customers, the result may be the compromising of trust, thus forcing customers to switch to a different hotel provider or even to choose a different destination. Yang and Peterson (2004) showed that exchanging costs might be a restraining factor in this situation. However, the hotel industry is characterised by few switching costs, which is why the loss of trust can easily deter customers and make them choose a different service provider that provides full information about possible downsides of its services.

Also, it is necessary to add that, as pointed out by Prahalad and Ramaswamy (2004c), today's global business environment is characterised by networking and increased customer communications. Therefore, customers may discuss fully any possible risks associated with a particular service provider in a dedicated community, such as TripAdvisor or Booking.com. The absence of official information about risks, in this case, is likely to present the company as dishonest and unscrupulous. In contrast,



the timely provision of information about risks through the official communication channels will allow the customers to accurately assess the quality of services and choose the hotel that provides more specific information. If such quality meets the customer value perception discussed earlier, they are likely to choose the services of a more honest company. On a side note, it is necessary to observe that premium-branded companies face more sophisticated requirements of information- sharing concerning any possible risks. A failure to communicate the information about such risks can significantly compromise the trust of numerous customers, as well as customer value (Kim et al., 2011; Ponnareddy et al., 2017).

Therefore, premium-branded companies should pay even more attention to providing factual information about the slightest risks if they want to maintain positive customer perception of the prices of their services.

Thus,

***H3a: Risk will have a positive impact on a hotel's price marketing strategy.***

***H3b: Risk will have a positive impact on a hotel's quality marketing strategy.***

### *Transparency*

Although Prahalad and Ramaswamy (2004b, 2004c) underlined the company's role in sharing transparent information with the customers, the truth is that this idea is not new and is an integral part of the value-based strategy. Kotler and Keller (2012) noted that when suppliers provide transparent value to the customers, this means that customers can 'easily understand how the supplier calculates the differential value between its offering and next best alternative' (p. 400). Transparency of information has an enormous impact on the perception of price since the provision of such information can increase price pressure for undifferentiated products and provide a correct image of the true value of highly differentiated services/products (Kotler & Keller, 2012; Rothenberger, 2015).

Transparency is the most critical factor that affects price satisfaction in financial services (Lymperopoulos, Chaniotakis, & Soureli, 2013), and it plays a leading role in decisions to purchase a vacation package (Carroll, Kworntnik, & Rose, 2007; Tanford, Erdem, & Baloglu, 2011, 2012) in a particular manner in the hotel booking process (McCole, 2002; Miao & Mattila, 2007).

Since the hotel industry provides highly differentiated services, it is no wonder that transparent prices can improve the perception of services of a particular hotel. Rothenberger (2015) found that when customers have more information on the price, their price fairness perception increases. In the Internet context, firms implement transparency to achieve differentiation based on information disclosed (Granados, Gupta, & Kauffman, 2008). Moreover, Kotler and Keller (2012) explicitly noted that when companies sell their products or services via the Internet, the price automatically becomes more transparent, as it clearly reveals the actual value of a service by a simple comparison. Transparency thus becomes a direct function of ready informational access and is consequently represented in product quality. Consequently, this allows customers not only to understand better how to use products but also to propose their suggestions about how the products and services can be improved. We hypothesise that this can be useful in the hotel industry because it will allow customers to fine-tune the services they receive until their perceptions of a particular hotel improve.

***H4a:*** *Transparency will have a positive impact on a hotel's price marketing strategy.*

***H4b:*** *Transparency will have a positive impact on a hotel's quality marketing strategy.*

#### *Price and Quality*

Since the current research is centred on the effect of DART building blocks on customer perception of price and quality, it is vital to take into account the notion of customer value (CV). As noted by Dovaliene, Masiulyte, and Piligrimiene (2015), customer value is the ratio of consumer value received to cost experienced when customers acquire a particular product/service. When

referring to customer value directly, without taking into account social and emotional values discussed in the previous sections, it is possible to adopt Naumann's (1995) creation of value triangle, formulated by quality, service and price. Naumann affirms that without these two factors (quality and pricing), it would be impossible to sustain a pricing marketing strategy base. We assume that superior quality should result in higher price, and this is linked to a premium pricing strategy. Premium pricing is used to signal to the customers that a particular hotel provides superior quality. The companies that offer more service often charge a premium price, which is why such a strategy would be a logical choice for the companies that adopt a value co-creation strategy (Yang, et al., 2016). Schamel (2012) posits that a hotel consumer is predisposed to pay higher, superior prices when the online ratings indicate a better hotel quality. Yacouel and Fleischer (2012) proved that guests take into consideration travel agents' ratings of a hotel's service quality and pay a premium for the highly rated hotels, while the findings of Yang et al. (2016) suggest that hotel guests are willing to designate more funds for quality hotel features such comfort, atmosphere, and additional services.

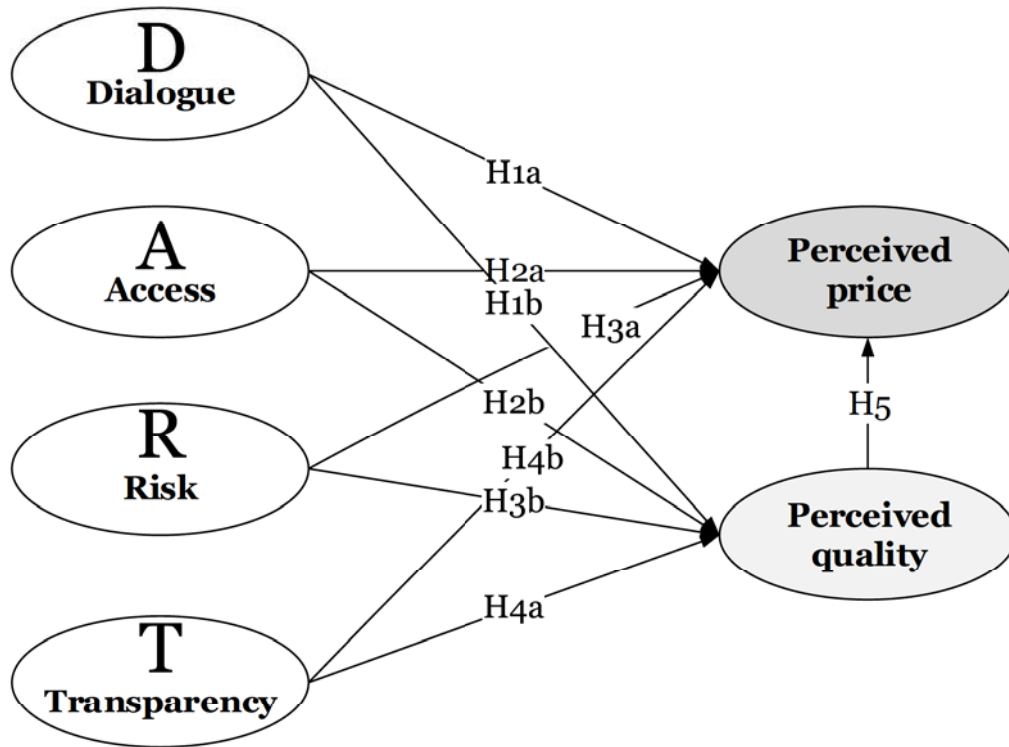
Coupled with transparent information about the high quality of services and full access to fine-tuning such services, along with their risks, signalling the superior quality of services would directly influence customer price perception, affecting positively their willingness to pay. Nonetheless most of the researchers have found evidence among pricing marketing strategies and the perceptions of quality (Chen & Dubinsky, 2003; Ye et al., 2014; Liu & Lee, 2016) that a general price and quality relationship does not exist (Zeithaml, 1988). In the hospitality context, higher service quality coincides with the highest room price, that is, higher quality incurs elevated costs in operation and administration, and consequently the hotels charge the highest prices (Chiu & Chen, 2014). Therefore, we pose the following hypothesis:

**H5:** *A hotel's quality marketing strategy will have a positive impact on pricing marketing strategy.*

These nine hypotheses are represented graphically in the proposed research model (Figure 2).



*Figure 2. Proposed model to be evaluated*



### 5.3 Methodology

To test our research hypothesis, Structural Equations Modelling (SEM) was used as an econometric technique. The main advantage of an SEM model is that this method allows work with unobserved conceptual variables (latent constructs), and constructs composed of many indicators (observed variables) (Lowry & Gaskin, 2014). In our case, our research model is composed of six latent variables. Consequently, various items were developed for each one of the research model constructs. To evaluate Dialogue and Access, the scales proposed by both Albinsson et al. (2016) and Taghizadeh et al. (2016) were adapted to the hotel industry. To measure the Risk dimension, the scales constructed by Albinsson et al. (2016) and Mazur and Zaborek (2014) were adjusted to the customer context. Moreover, for the Transparency construct, the Albinsson et al. (2016) scale was used. We do not forget that the DART model was conceived to evaluate VCC in a business context; therefore, we

must remark that for our study, the DART scales were adjusted to the customer's perspective. Finally, for the perceived quality and price, the items were drawn from both Al-Dmour, Al-Zu'bi, and Kakeesh (2013) and Yoo, Donthu, and Lee (2000). A five-point Likert scale (1 = Totally disagree and 5 = Totally agree) was implemented to evaluate the research model's scales (Appendix I).

### **5.3.1 Data Collection and Sampling**

The design of the questionnaire involved two parts (Appendix I). One part was dedicated to demographic data and the second part evaluated the DART dimensions and the price and quality constructs.

The sample were international tourists, and after we got the required permission from airport authorities to conduct the survey, it took place at airports around Greece while tourists were waiting for their return flights.

As a requisite for the tourists to take part in the survey, they must have stayed at a hotel before their flight.

Also, it is important to mention that to avoid exposing some minor errors in the process of data collection, a pilot study (40 surveys) was conducted at the International Airport of Thessaloniki. After four months and once we verified that the pilot study did not present any trouble, the survey was performed at the international airport of Athens and the international airport of Corfu. We received 158 and 326 questionnaires respectively.

Concerning the statistical analysis of our data, Structural Equation Modelling (SEM) necessitates a considerable sample size, and a common sample size is 200 cases (Crockett, 2012; Kline, 2011). Consequently, the aggregate of 484 questionnaires from our surveys are adequate for performing our SEM analysis. The software AMOS 22.0 was used for the SEM statistical analysis.

## 5.4 Sample's characteristics

In Table 2 the principal features of the sample are presented. Specifically, the survey gathered 484 questionnaires. The majority of the sample (53.31%) were female travellers. Most of the surveyed (25.10%) correspond to the age group of 50 to 64, followed by the age group of 25 to 34 with 24.69%. Just behind, with one less respondent, is the age group of 35 to 49 with 24.48%, while the age group of 14 to 24 accounts for 17% of the sample. Lastly, only 8.71% of the respondents are above 65. Most of the sample (42%) hold a postgraduate degree, followed by those who have finished tertiary education with 28%, and those with secondary education level at 26%. Finally, 5% belong to the group with primary education level. UK citizens are many of the surveyed and almost half of the sample size with 49.59%. Germans are next with 10%, followed by Polish and Greeks with 5%. Finally, 29.75% is a group that comprises all other respondents from countries that represent less than 5% of the sample. Most of the respondents (44.51%) chose to stay at 4-star hotels, while the remainder of the tourists were proportionately divided among 3- (27.95%) and 5-star hotels (27.54%). The respondents of the sample that travelled as a family made up 47%, while 41% responded 'other', and just 10% travelled single. Most of the surveyed tourists (74%) were in Greece for holiday, followed by 13% for other different reasons. Those who travelled for business are 7% of the sample, followed by health travellers (4%).



*Table 2. Demographic profile*

<b>Gender</b>	<b>N</b>	<b>%</b>	<b>Type of trip</b>	<b>N</b>	<b>%</b>
Male	226	46.69%	Single	49	10.38%
Female	258	53.31%	Family	225	47.67%
<b>Age</b>			Other	198	41.95%
14–24 years	82	17.01%	<b>Reason to travel</b>		
25–34 years	119	24.69%	Business	33	6.99%
35–49 years	118	24.48%	Leisure	356	75.42%
50–64 years	121	25.10%	Health	20	4.24%
65 years or above	42	8.71%	Other	63	13.35%
<b>Education level</b>			<b>Country</b>		
Primary	23	4.78%	Germany	48	9.92%
Secondary	116	24.12%	England	240	49.59%
Tertiary	137	28.48%	Greece	26	5.37%
Postgraduate Degree	205	42.62%	Poland	26	5.37%
<b>Hotel's stars</b>			Others	144	29.75%
3	135	27.95%			
4	215	44.51%			
5	133	27.54%			

## 5.5 Results

Considering previous research work (Barrera & Carrión, 2014; Guerrero, Cunningham, & Urbano, 2015; Kim, Park, & Park, 2017) and given the nature of our variables/constructs (e.g. latent variables), SEM was adopted to evaluate our research hypothesis (Fig. 1). SEM identifies causal relations amongst the latent constructs that form our research model of the conditioning (DART) marketing strategy. SEM, as an econometrical procedure, has been extensively employed in marketing and management disciplines over the years. In this sense, Hair, Anderson, and Tatham (2010) pointed out the SEM advantages as it permits the exploration of relationships amongst different constructs, either independent or dependent (Tabachnick & Fidell, 1996).

This technique is performed in two phases. In the primary phase, we must evaluate the measurement model (MM), while later the structural model (SM) must be estimated (Hair et al., 2010; Kim et al., 2017).

The measurement model in this study for convergent validity (CV) and discriminant validity (DV) is assessed through confirmatory factor analysis (CFA). CFA was tested by means of the software IBM SPSS and AMOS statistic 22.0. First, our CFA examined the individual item 'reliability'. CFA indicates that each item's scale must go beyond a limit of 0.70. Nevertheless, values less than that limit could be accepted if both CV and Degrees of freedom (DF) are fulfilled (Hair et al., 2010). Therefore, to avoid losing critical information for our conclusions, we decided not to eliminate the item D3 ( $\lambda = 0.674$ ) that does not fit this criterion.

Reliabilities of the DART dimensions and price and quality constructs oscillated in value from 0.797 to 0.972, and all surpassed the suggested level of 0.7. A high alpha ( $\geq 0.70$ ) and Composite reliability signify that all scale items are estimating the same concept.

For the average variance extracted (AVE) measures (Fornell & Larcker, 1981), all the constructs are over the suggested limit of 0.50 (never below 0.62). Therefore, the results above mentioned would allow determining the presence of CV and DV of the scales of measurement for our research model. At the same time, both the Kaiser–Meyer–Olkin (KMO) test and Bartlett's test of sphericity ( $\chi^2$ ) presented fair values of acceptance for this assessment (see Table 3).

*Table 3. SEM-Measurement Model*

Constructs	Codes	$\lambda$	$\alpha$	AVE	CR	KMO	$\chi^2$
Price	PP1	0.918	0.980	0.854	0.959	0.861***	1801.427
	PP2	0.920					
	PP3	0.941					
	PP4	0.918					
Dialogue	D1	0.821	0.934	0.615	0.864	0.754***	596.018
	D2	0.865					
	D3	0.674					
	D4	0.765					
Access	A1	0.894	0.958	0.732	0.916	0.817***	1116.833
	A2	0.905					
	A3	0.892					
	A4	0.718					
Risk	R1	0.857	0.961	0.743	0.920	0.807***	10800.192
	R2	0.894					
	R3	0.878					
	R4	0.816					
Transparency	T1	0.894	0.950	0.746	0.898	0.699***	5750.843
	T2	0.881					
	T3	0.814					
Quality	PQ1	0.847	0.958	0.781	0.914	0.719***	689.944
	PQ2	0.903					
	PQ3	0.900					
<i>Model fits</i>	$\chi^2(df)$		GFI	AGFI	CFI	IFI	RMSEA
<i>Results</i>	416.054***(186)		0.929	0.903	0.972	0.972	0.051
<i>Recommended</i>	p < 0.05		0–1	0–1	0–1	0–1	< 0.8

*Notes: 0 (not fit) to 1 (perfect fit)  $\lambda$ : Factor Loadings;  $\alpha$ : Cronbach's Alpha; CR: Composite reliability; AVE: Average variance extracted; KMO: Kaiser–Meyer–Olkin;  $\chi^2$ : Bartlett's test of sphericity*

In Table 4, Discriminant validity (DV) is calculated by analysing the square root of the AVE (Barrera & Carrión, 2014; Fornell & Larcker, 1981). This table discloses the results of the correlations among constructs and has demonstrated that no pair of relationships was above 0.80, implying that there is no multi-collinearity and there is confirmation of discriminant validity (Kim et al., 2017). The goodness-of-fit (GOF) statistics of CFA (Hair et al., 2010; Kim et al., 2017) suggest an appropriate fit (GOF) of the model to the data (see its indexes in Table 3).



The econometric analysis of an SEM measurement model concludes once we have shown the validity and reliability of the research model. Thus, it would be possible to pass on to the second phase, that is, the structural model (SM) evaluation (Barrera & Carrión, 2014; Guerrero, Cunningham, & Urbano, 2015; Kim et al., 2017).

**Table 4. SEM-DV and Correlations**

<i>Constructs</i>	(1)	(2)	(3)	(4)	(5)	(6)
<i>(1) Risk</i>	1					
<i>(2) Access</i>	0.668**	1				
<i>(3) Dialogue</i>	0.595**	0.657**	1			
<i>(4) Transparency</i>	0.819**	0.676**	0.637**	1		
<i>(5) Quality</i>	0.597**	0.640**	0.428**	0.639**	1	
<i>(6) Price</i>	0.567**	0.490**	0.346**	0.580**	0.792**	1

\*\* . Significance at the 0.01 level

The structural model (Fig. 2) was assayed by means of the estimation of path coefficients and the explained variance ( $R^2$ ) of dependent constructs, that is, the relationship between DART dimension and price and quality. The SM results are provided in Table 5. The results of the SEM indicate acceptable fits (e.g., GFI = 0.940; CFI = 0.973 and RMSEA = 0.049). Thus, the significance of the parameter estimates was assessed using t-values.

**Table 4. SEM – Structural Model Results**

<i>Hypotheses</i>	<i>Effect</i>	$\beta$	$\varepsilon_0$	<i>t-Values</i>	<i>Support</i>	$R^2$
<i>Dialogue</i> → <i>Quality</i>	+	-0.06	0.056	-1.224	No	<b>0.45</b>
<i>Access</i> → <i>Quality</i>	+	0.29***	0.054	5.420	Yes	
<i>Risk</i> → <i>Quality</i>	+	0.17**	0.065	2.650	Yes	
<i>Transparency</i> → <i>Quality</i>	+	0.27**	0.089	3.007	Yes	
<i>Dialogue</i> → <i>Price</i>	+	-0.08	0.046	-1.709	No	<b>0.62</b>
<i>Access</i> → <i>Price</i>	+	-0.08	0.043	-1.972	No	
<i>Risk</i> → <i>Price</i>	+	0.10*	0.053	1.972	Yes	
<i>Transparency</i> → <i>Price</i>	+	0.16*	0.074	2.197	Yes	
<i>Quality</i> → <i>Price</i>	+	0.73***	0.052	14.156	Yes	

Model fits	$\chi^2(df)$	GFI	NFI	CFI	IFI	RMSEA
Results	405.226*** (194)	0.940	0.951	0.973	0.973	0.049
Recommended	$p < 0.05$	0-1	0-1	0-1	0-1	$< 0.8$

\* $p < 0.05$  \*\* $p < 0.01$  \*\*\* $p < 0.001$

Notes: 0 (not fit) to 1 (perfect fit);  $\beta$  = Path Coefficients;  $\epsilon\sigma$ : Standard Error

Our SEM using Partial Least Square (PLS) analysis (Table 4) provides some insightful results. First at all, our results indicate that a variable of the DART model, the so-called Dialogue, does not have a positive influence on the constructs ‘perceived quality’ ( $\beta = -0.06$ ,  $p > 0.05_{H1b}$ ) and ‘price’ ( $\beta = -0.08$ ,  $p > 0.05_{H1b}$ ). Hence, there is no support for these two hypotheses ( $H1a, H1b$ ). This means Dialogue has no impact on hotel marketing strategies with regard to quality or price. Therefore, these results should lead to future research on why dialogue has a negative impact in the context of the accommodation industry, which contradicts the values we expected.

Concerning hypothesis 2, the results support the positive effect that Access has on perceived quality ( $\beta = 0.29$ ,  $p < 0.001_{H2b}$ ), and consequently we can confirm such a hypothesis. On the other hand, Access does not have a positive impact on the perceived price of hotels ( $\beta = -0.08$ ,  $p > 0.05_{H2b}$ ), so we must reject this hypothesis. Therefore, why this relationship is negative in the hotel industry context is a question for future research.

Our third hypothesis is supported as we confirm that Risk has a positive effect on both perceived price ( $\beta = 0.10$ ,  $p < 0.05_{H3a}$ ) and perceived quality ( $\beta = 0.17$ ,  $p < 0.01_{H3b}$ ). At the same time, our fourth hypothesis is also supported as Transparency affects both price ( $\beta = 0.16$ ,  $p < 0.01_{H4a}$ ) and quality ( $\beta = 0.27$ ,  $p < 0.01_{H4b}$ ). Lastly, there is a robust support for the fifth hypothesis ( $\beta = 0.73$ ,  $p < 0.001_{H5}$ ).

To sum up, we can see that the amount of variance explained by the dimensions of the DART model on the strategic variables of hotel marketing is moderately high, with the price explained by 62% and quality by 45%.

## 5.6 Conclusions

Our research has investigated the impact of VCC on the perceived price and quality of hotel services. The study is supported by the fact that the unique value that consumers co-create is mainly affected by the perceived price and quality. The DART model was used as the VCC framework, with the exception that it is was used from the customers' point of view. This exception provided us with better support for evaluating the effect of VCC procedures on the price and quality perceptions of customers in the hospitality and tourism industry.

Our results indicate that VCC though the DART model partially affects customers' perceptions of price and quality of service. More specifically, dialogue does not seem to have any effect on either perceived price or quality while Access does not affect the price. A possible explanation concerning the Dialogue construct is that the dialogue was probably a superficial communication that did not reach the understanding which is vital for VCC (Ballantyne, 2004) and subsequently did not affect customers' price and quality perceptions. However, according to our literature review, not all forms of dialogue may affect the customer's perception (Grönroos, 2004) independent of the variety of communication channels offered by the hotel (Ballantyne, 2004; Grönroos, 2004).

The results suggest that perceived quality was affected by the access provided by the hotel. However, that access did not affect the guest's perceived price. A possible explanation is that most of the hotel's guests (mainly those in Corfu) bought a travel package including accommodation, transport, and probably other services. A customer study reveals that vacation packages influence the clients' perceptions related to price and value (Tanford et al., 2012). Consequently, it would be complicated for them to assess the price for accommodation separately. Nonetheless, the quality of hotel services is more naturally assessed by the guests using the hotel's star category. That is in line with Parasuraman, Zeithaml, and Berry (1985) and Piri and Lotfizadeh (2016) because access to hotel information on services facilitates guests comparing them with actual performance.



Furthermore, this research has confirmed that Risk and Transparency affect customers' perceptions of price and quality, which is in line with the theory (Zanfardini, Simó, & Alcañiz, 2013; Rothenberger, 2015; Piri & Lotfizadeh, 2016). Hence, for example, the results are in line with theory as the Internet and communication technologies make it very difficult for hotels to conceal information on possible risks of their service offerings. All that information is used by guests to assess the risk involved in the services they receive, which consequently enhances trust between actors. Moreover, the results are coherent with the theory that transparency of information has the greatest impact on the price perception (Miao & Mattila, 2007; Rothenberger, 2015). That is also in line with the work of Rothenberger (2015) in which transparency in price causes positive price perception. Concerning perceived quality, the results are coherent with previous studies such as Zanfardini, Simó, and Alcañiz (2013) which indicate that transparent business practices enhance tourists' perceived quality level.

On the other hand, concerning the relationship between price and quality, our results provide excellent empirical support in this matter, which is consistent with prior research work (Chen & Dubinsky, 2003; Schamel, 2012; Yacouel & Fleischer, 2012; Chiu & Chen, 2014; Ye et al., 2014; Liu & Lee, 2016; Yang et al., 2016). Thus, the results have established that quality perceived positively affects price perceived.

Our study has exposed the existence of a relationship between two marketing models based on the paradigms of value creation and VCC. Following Chathoth et al. (2013), these two paradigms can be understood as a continuum rather than as a dichotomy. Furthermore, we can understand that VCC is produced within the exchange value (Wiltshier & Clarke, 2017). Companies and clients have well-adjusted and interdependent roles in the production of services and the creation of value. However, this reciprocally advantageous relationship is complicated to accomplish (Chathoth et al., 2013). This difficulty has been verified in our DART model, especially with the null influence exerted by the dimension of dialogue on the perceptions of price and quality. Dialogue has a central role in this interactive process (Payne et al., 2008). From this perspective, Vargo and Lusch, (2004) indicate

the Goods-Dominant approach is applicable in the hotel environment, given that customers have minimal capacity to choose with regard to the definition of hotel products and services. Thus, the producer (hotelier) predefines the tangible and intangible aspects of various hotel products and services before involving the client in this process (Chathoth et al., 2013)

## **5.7 Implications**

On the one hand, our proposed research model has allowed the integration of two marketing paradigms, observing what may be the elements that facilitate their connection. Prahalad and Ramaswamy (2004b) claim the different components of the VCC can be combined to achieve this connection between both paradigms. The features of price, quality, and value are essential determinants of purchasing conduct (Zeithaml, 1988; Tanford et al., 2012). In this vein, our analysis has demonstrated that the perceived price and the perceived quality are related to the customer's co-creation strategy with regard to some of its dimensions. In this way, we have observed that risk and transparency are the components of the VCC that affect customer perceptions of both price and quality. Therefore, these two VCC dimensions can create new capacities for the hotel's managers (HM). Thus, an HM can enhance the combination of transparency and risk to develop trust together with the clients regarding the price and quality of hotel products and services. Also, hoteliers can favour the combination of access and transparency to enhance the clients' capacity to make decisions about the perceived quality of the hotel that are supported by consistent information. Hoteliers have to re-examine how they provide information to customers as well. HM have to provide information to the hotel's clients through various channels so that they clearly feel that they have control and decision-making power in the choice of hotel.

Also, in line with Granados, Gupta, and Kauffman (2008), companies (hotels) can make an enormous effort to develop transparency strategies to achieve differentiation based on the information

provided. Thus, hoteliers who want to differentiate themselves from their competitors should replace their traditional marketing strategies, focussed on the product, to concentrate on other strategies based more on co-creating value with hotel customers. In addition, HM should look at the possibility of allowing the collaboration of customers in the hotel's VCC of its products and services.

On the other side, we can argue that hotels which apply VCC as a strategy must take into consideration the impact on the customer's price and quality perception, as it can also affect their price strategy. Consequently:

Hotel managers can actively incorporate VCC as a strategy to enhance consideration of the desires and preferences of hotel guests and increase the quality of the services and products.

Moreover, HM can utilise VCC procedures to engage customers and improve their perceptions of price and quality.

Hoteliers can also use VCC to signal the higher quality of their services and efficiently use a premium pricing strategy.

## **5.8 Limitations and new research directions**

As an overwhelming number of studies have limitations, our research could not be the exception. In this sense, we can point out some flaws that at the same time become possible future research lines. The study's limitations are concentrated especially in the sample of convenience and the approach of the research model. In the case of the study's sample, our tourists surveyed are guests of hotels located mostly in a holiday resort, such as the island of Corfu. Also, many of them are leisure tourists who had booked their trips through tour operators. Therefore, these tourists tend to be more conventional in their way of organising and enjoying their vacation trips. Hence, it would be good to expand the study to other tourist destinations that include a higher diversity of hotel customers. Also, new research could investigate the tourist segments according to how they organised their trip, whether autonomously contracting with the hotels or through a package organised by a travel agency



or other intermediary agents. Perhaps tourists who organise their trip by themselves would be postmodern tourists (López-Bonilla & López-Bonilla, 2009), and they may be more willing to contribute to the VCC than those tourists who buy a tour package. Likewise, According to Ye et al. (2014), it would be possible to explore the moderating impact the type of trip (leisure tourists vs. business tourists) and the hotel category (number of stars) might have on VCC and marketing strategies based on quality and price.

A second limitation comes from the research model, in this study the connection proposed between two marketing approaches (VC and VCC). For this, the DART model and the two most relevant factors of the perceived value of the client have been used: *perceived quality and perceived price*. These two antecedents are functional or utilitarian factors. However, it may be necessary to include other components of perceived value that are more ingrained with hedonistic factors, since hotel services lend themselves to them. Thus, different study variables could be included, such as social values and emotional values. Other factors related to the benefits and sacrifices of perceived value, such as image or reputation, could also be added to the research model.

Finally, it should be mentioned that the marketing strategies studied regarding price and quality have focused mainly on the monetary price and quality of service. Therefore, it would be interesting to extend the analysis to other variables that include the non-monetary price and the quality of the hotel product.

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## **CHAPTER 5**

### **Conclusions, Implications, Limitations and Future Research**

Throughout this thesis, we contributed to social science, and more specifically to service marketing by scrutinising VCC aspects in the hospitality sector.

This chapter provides a summary of the previous chapters conclusions, presents managerial and academic implications, and lists some possible limitations. Finally, we offer opportunities for future research.

#### **6.1 Conclusions**

This dissertation aimed to explore the procedures of Value Co-Creation in the hospitality industry facilitated by the DART model. DART model is the fundamental tool that we have used in all papers of this research to explore the impact of VCC procedures in various aspects of marketing management.

In the first chapter, the literature review illustrates how information and communication technologies have formed a new marketing landscape by empowering consumers. New marketing approaches have emerged to tackle this innovative situation positioning Value Co-Creation in the heart of their theories, indicating these ways its crucial role. The literature review denotes VCC as a dynamic concept that is not yet clearly defined. Nonetheless, many attempts have been made to clarify the procedures of VCC and DART model is considered as one of the most efficient efforts to untangle VCC procedures. We focused hospitality industry is a field where VCC can blossom because it is service-based industry, and affected mainly by the advancements in Information and Communications Technologies that empowers customers. However, there is little research concerning VCC in the hospitality industry suggesting open opportunities for contribution.

### **6.1.1 Chapter 2: DART model from a customer's perspective: An exploratory study in the hospitality industry of Greece.**

In the second chapter, we develop a scale based on DART model to assess hotels' service experience environment from a customer's perspective. The scale was developed and validated about hotel guest's experiences since each hotel guest perceives VCC procedures as a unique experience. It is the first time that a measurement scale was developed from a customer's perspective based on the DART model. Also, it is the first time that this scale is evaluated in the hospitality context. Hence, is it a unique tool that can facilitate hotel managers to assess their hotel readiness to engage their customers to value co-creation procedures, especially since it provides an evaluation of the VCC process from a customer's perspective. Furthermore DART scale can be utilised by hotel managers to reflect on the offered services critically.

### **6.1.2 Chapter 3: Consolidating DART–Value Co-Creation Theory in the Context of Customer Satisfaction: Empirical Evidence from Greece's Hospitality Industry**

In this paper, we test the validity and reliability of the DART scale in the hospitality context from a customer's perspective. More specifically we investigate whether VCC affects customer's positive experience and consequently customer's satisfaction.

The results indicate that only partially the building blocks of interaction affect customer's positive experience. More specifically the building blocks of Transparency and Access have a positive impact on customer's experience while on the other hand Dialogue and Risk does not affect customer's positive experience. This outcome is inferable from the setting of conventional lodgings, and particularly to seaside resorts, where visitors purchase time off of their schedules to unwind. Any



need to contact hotel staff, as a rule, comes about because of something that isn't pleasing. Thus, a dialogue in a resort hotel might be associated with an unpleasant experience. Also, informing hotel guests about possible risks also does not enhance a customer's experience positively. The results of the research furthermore denote a strong relationship between customer's positive experience and customer's satisfaction.

### **6.1.3 Chapter 4: Value co-creation and exchange value in the hotel industry in Greece**

In the fourth paper, we investigate the effects of VCC on the perceived price and quality of hotel services through the DART scale. The results indicate that the price and quality perceptions of hotel customers are not affected by dialogue while Access does not affect the perceived price. Concerning dialogue that might be the case where dialogue between customer and hotel was not deep and meaningful enough. While for Access a justification might lie to the fact that hotel stay was embedded in vacation package making it hard to assess hotel's price.

Instead, the building blocks of Transparency and Risk have an impact on perceived price and quality. Moreover, the outcomes of the study designate that perceived quality affect price perception positively.

Lastly, our results reveal that in the hotel context Goods-Dominant logic is still relevant since the hotelier already predefines many tangible and intangible aspects of the service before engaging customer to a VCC procedure.

## **6.2 IMPLICATIONS**

In this section, we present the key implications for managers and academics

### **6.2.1 Chapter 2: DART model from a customer's perspective: An exploratory study in the hospitality industry of Greece.**

It is the first time that a measurement scale was developed from a customer's perspective based on the DART model. Also, it is the first time that this scale is evaluated in the hospitality context. Hence, is it a unique tool that can facilitate hotel managers to assess their hotel readiness to engage their customers to value co-creation procedures, primarily since it provides an evaluation of the VCC process from a customer's perspective. Furthermore, DART scale can be utilised by hotel managers to reflect on the offered services critically.

### **6.2.2 Chapter 3: Consolidating DART–Value Co-Creation Theory in the Context of Customer Satisfaction: Empirical Evidence from Greece's Hospitality Industry**

Several implications can be drawn from the third chapter VCC strategies mean that hotel managers should invest in technologies that allow customers to have access and make informative decisions on how, when, and where to receive hotel services. Increasing transparency in every aspect of hotel management enables trust-building, a necessary element for dialogue and thus VCC. The model reveals strengths and weaknesses of methods employed for interactions with guests since the model uses a customer perspective. Managers should evaluate a hotel's openness to guests, and possibilities and offerings for co-creation. Consequently, hotels must provide customers with access to tools and information to co-create value experience. DART offers a path to enhanced interactions

between firms and customers, but more research is needed regarding types of accommodations and guests.

### **6.3 Limitations and future research**

Finally, the writing of the thesis and the conclusions of each paper have revealed some limitations that nonetheless generated paths for future research. More specifically the first limitation is related to the time frame of the customer- hotel interaction. In our research, we have investigated VCC procedures only after the customers have left the hotel, while the interaction between the customers and the hotel can take place before and during a hotel stay (Frías, Polo, and Rodríguez, 2017). The second limitation is that the vast majority of the sample was holidaymakers that have stayed at resort hotels in Corfu. Future research should examine other types of accommodations, a different type of guests, and even different destinations. In addition, most of the tourists that responded to the questionnaire have bought their holidays through tour operators who might lead to the assumption that these tourists are more conventional and not so willing to contribute to VCC, contrary to postmodern tourists (López-Bonilla & López-Bonilla, 2009). The third limitation is related to the fact that in our model we have used only two factors associated with the perceived value, perceived price and perceived quality. Other studies can include other variables as well.



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## APPENDIX

This is a study concerning Value Co-Creation in the Hospitality Industry. The survey is confidential and we never reveal personal information.

Gender ☐ Male ☐ Female

Age \_\_\_\_\_

Country \_\_\_\_\_

Education Level

☐ Primary education

☐ Secondary Education

☐ Tertiary Education

☐ Postgraduate Education

Hotel's star

☐ 5\*

☐ 4\*

☐ 3\*

Type of trip

☐ Single

☐ Family

Reason to travel

☐ Business

☐ Leisure

☐ Health

☐ Other \_\_\_\_\_

For the next several questions, please choose a number from 1 to 5 next to each statement to indicate how much you agree or not.

1

2

3

4

5

Strongly disagree

Strongly agree

DIALOGUE WITH HOTEL	1	2	3	4	5
I had an active dialogue with the hotel staff on how to add value for its services.					
The hotel staff encouraged me to express my thoughts and needs for better services.					
The hotel gave me the opportunity to share my ideas to add value to its services.					
I used different communication channels to have dialogue sessions with hotel staff.					
ACCESS TO HOTEL	1	2	3	4	5
I could decide how to receive the services offering					
I could have many options to choose how to experience the service/product offering.					
I could receive the service/product offering when, where and how I want it.					
I had the opportunity to share in the design process of service/product.					
TRUST WITH HOTEL	1	2	3	4	5
I received adequate information to evaluate the benefits and risks of the hotel's services.					
I obtained complete information about the risks and advantages of the hotel's service.					
The hotel was very clear and factual about both the negative and positive factors associated with the services offering.					
The hotel personnel gave me advises me on how to use its services to avoid various kinds of risks.					
TRANSPARENCY OF THIS HOTEL	1	2	3	4	5
The hotel provided me all the information, which might be helpful to improve the outcomes of the service experience.					
The hotel affords me open access to information that might be useful in enhancing the overall design and delivery of the service experience.					
I was treated as an equal partner in sharing information that was needed to achieve a successful hotel service experiences.					
The information (costs and pricing) provided by the hotel was up-to-date, which fosters the best possible experience with relation to its services they offer.					
POSITIVE EXPERIENCE WITH HOTEL	1	2	3	4	5
I had a positive experience with relation to room service					
I had a positive experience with reception					



I had a positive experience with hotel staff					
I had a positive experience with relation to easy access to find the hotel					
<b>SATISFACTION WITH HOTEL</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
I was satisfied with the consumer service of the hotel					
My stay at this hotel has met my expectations.					
My interaction with the hotel was satisfactory					
In general, I was satisfied with the hotel					
<b>LOYALTY WITH HOTEL</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
I am likely to come back at this hotel					
I am liable to do most of my future stay with this hotel					
I will recommend the hotel to my friends and relatives.					
I enjoy discussing this hotel with others.					
<b>PRICE PERCEIVED</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The hotel's price are reasonable					
The hotel is offering good value for money services					
The hotel's price are appropriate to me					
The prices are adequate compared to the quality of services provided.					
The prices are competitive compared to the other hotels.					
<b>QUALITY PERCEIVED</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The product/services of this hotel addressed my needs					
The total hotel service quality met my standards					
The hotel service is of high quality					
The hotel service is innovative					
<b>PROMOTION</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
The promotion of the product is very attractive					
The information content in hotel's communications is of high quality.					
The hotel's advertisements (on TV, the internet, social networks) are frequently seen.					
The hotel provides me with special offers.					
In general, I can feel that there is credibility in the hotel's advertisements.					
<b>PLACE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Hotel's location is appropriate for me.					
The hotel is easy to find on the internet.					
The hotel's website is well friendly					
Hotel is accessible through electronic devices					

If you need more information about the study.  
Please contact with  
**Prof. Dr. Jesus Peña-Vinces:** email:jesuspvinces@us.es

Thank you so much, we really appreciate your time, have a safe trip.